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PEBBLES

PATRICK





Pedagogical Pebbles

BY

J. N. PATRICK, A. M.

Author of "Lessons in English," "Essentials of English"

AND

"Elements of Pedagogics."

"Every man's task is his life-preserver."—EMERSON.

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EDUCATION DEPT.



PREFACE.

Thesê "Pebbles" were suggested and jotted down while I was engaged in the actual supervision of graded school work. This account of their origin explains the form in which they are presented. Each pebble is independent, being related to the others only in the order of its birth.

The book aims to be merely suggestive. The teacher who needs more than suggestion needs more than detail. A teacher's greatest need is inspiration, not direction. No copyist ever inspired a dull pupil. We have already had too much copying. No one ever achieved success in the school room by blindly following authority. Success in teaching comes from a conscious knowledge of correct methods and tact in applying them.

This little book is not a school room guide. It has a higher mission than mere direction. It is a modest attempt to call the attention of young teachers to many small points in the theory and practice of teaching which they may not have learned in the study of pedagogy. It is published in the hope that it may lead many teachers to look within for the inspiration, purpose, and self-reliance which make teaching real.

ST. LOUIS, MO., June, 1895.

J. N. PATRICK.

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PART FIRST.
GENERAL SUGGESTIONS.

*“Thou
That Teachest
Another
Teachest Thou Not
Thyself?”*

PEDAGOGICAL PEBBLES.

¹ The teacher is on the decline who does not find in the presence of a class of children the inspiration which fills him with the spirit of love and helpfulness.

² In the primary grades the teacher is the only source of inspiration. During the first four years of a child's school life, fifteen minutes a day with a breathing teacher is worth more to him than an hour with a text-book. With pupils under ten years of age the teacher is the text-book.

³ The one great habit which pupils should acquire during the first four years of school life is that of self-reliance. Facts are valuable, but habits are more valuable. The teacher who helps a pupil to acquire proper habits of study has done him a substantial service. Correct methods of instruction establish correct habits of study. Method is the mother of habit. Habit is self.

⁴ The most impressible period of a child's school life is spent in the primary grades. Easy and careless teaching during that period is intellectually destructive. Under the direction of timid and ignorant inexperience, children acquire habits that the tact and the patience of even the ablest teachers cannot always dislodge. As children acquire but little lasting information in the primary grades, they should acquire correct habits of

study. There is no reason why the six year old child should not be as correctly taught as the twelve year old child. In the primary grades especially, the teacher's presence should be felt as well as seen. Earnestness, energy, and sympathy on the part of a primary teacher usually find a ready response in the heads and the hearts of little ones.

⁵ During the first four years of school life, a pupil should master the mechanical part of reading and the fundamental rules of arithmetic. In reading, he should learn to call words readily and correctly; he should learn the meaning and the use of punctuation marks; he should learn something of emphasis and inflection. In arithmetic, he should master the four fundamental rules. He should be able when he enters the grammar grade to add numbers as rapidly as he can speak results; to read differences and quotients as quickly as he names words in the reading lessons. This the average pupil can do, if he is properly taught the work of each grade.

⁶ If a pupil does not acquire correct reading habits in the first four grades, the chances are that he will never acquire them. If he does not learn to do the work of the fundamental rules in arithmetic in accordance with the established laws of mind and facts of number, the chances are that he will hesitate and blunder, in the merely mechanical work of arithmetic, throughout life. The place for the most exact teaching is in the first four grades. Only the most conscientious, competent, and earnest teachers should be placed in those grades. The determining habits of pupils are formed in the primary grades.

⁷ No one who has not been trained in a training school, or in the actual work of the school-room and at the expense of children, can properly teach or govern children. The bad habits acquired by pupils under the misdirection and indifference of unthinking and immature boys and girls, are known only to those who have given the subject intelligent consideration. A school may be a help or a hinderance; which, depends entirely upon the kind of teacher it has. The ideals which it creates may bless or blight. It is a self-evident fact that wrong methods of instruction establish wrong habits of thinking. Pleasure in the pursuit of knowledge depends upon methods of study. The mind when properly exercised is always pleased with its experiences.

⁸ The recitation of the words of a text-book, without ample illustration, is a school room farce. Without the ability to illustrate, a pupil learns much he will never know; that is, he merely recites the words of another, and mere recitation does not involve the understanding; it has little intellectual or moral value. Ample and clear illustration by the pupil is the only measure of his knowledge of the lesson, hence teachers should insist upon illustrations of definitions and rules.

⁹ The three great obstacles in the way of American school children are, (1) the youth of many of the teachers, (2) the lack of training on the part of a large majority of teachers, (3) the use of too many text-books in the lower grades. Text-books have put many schools to sleep. Humdrum, text-book recitations soon stupify the brightest class.

¹⁰ Sound methods put the burden of the work upon the pupils. The successful teacher does not recite the lesson for the pupils nor feed them with suggestive questions. He talks but little. Pupils go to school not to learn to lean upon teachers and books, but to be trained in habits of self-reliance. They go to school not to hear teachers tell things, but to tell things themselves; not to be filled, but to be unfolded. Schools are supported not that teachers may recite to pupils, but that pupils may recite to teachers. Telling a pupil is not training him; mind is developed only by its own activity. Mere filling is not culture; culture is the ability to reason. Think of this fact, talking teachers. Divide your talking by two and thus multiply the value of your services by four. A pupil's greatest need is training, not cramming. Text-book recitations are only means to an end; habit is the end.

¹¹ The soul rejoices only in self-won victories. It feels no special pleasure in results obtained through the direction of others. The earlier a child is trained to rely upon itself, the less the total burden of teaching it. The pupil's greatest need throughout school life is inspiration, not direction. Pupils should be encouraged to realize their aim through their own efforts. Much help on the part of the teacher weakens the will of the pupil and leads him to look for help when he should not receive it. In many schools the pupils are not required to think for themselves. The teachers tell and the pupils believe. Traditional routine is master. Real teachers train pupils to rely upon themselves; school-keepers train them for beggars. Teachers stimulate activity; school-keepers stupify it.

¹² Pupils do only what they are permitted, or rather encouraged, to do. If they are noisy, it is the teacher's fault; if they do not sit and stand erect, it is the teacher's fault; if they look down upon the floor or out of the window while reciting, it is the teacher's fault; if they fall into their seats while uttering the last words of a sentence, it is the teacher's fault; if they use both hands in holding their books, it is the teacher's fault; if they lean against the wall or hold fast to a desk while reciting, it is the teacher's fault; if they fill the air with wriggling hands, it is the teacher's fault; if non-reciting pupils disturb a reciting pupil, it is the teacher's fault; if pupils are not respectful to the teacher, it is the teacher's fault. The teacher is responsible for the school habits of his pupils. A teacher may have both head and heart culture and be a school room failure. She may be faithful, but still unsuccessful. The beginning of success is a gift.

¹³ It is strange, passing strange, how little of improper bodily habits some teachers see. They have eyes but see not. It is stranger still how few ungrammatical expressions some teachers hear. They have ears but they hear not. Every ungrammatical expression should be heard and corrected at the time. Every such correction is more valuable than a regular lesson in formal grammar.

¹⁴ Restlessness on the part of pupils can be cured only in one way—that is by getting them to work. Give them all they can do. Make the recitations so exacting (not so long) that they must study. Do not use the recitation time in talking, but use it in hearing.

¹⁵ Telling pupils to "go to work" or to "get their lessons," never yet caused one pupil to go to work or to get his lesson. Make the recitations so personal, so exacting, that the average pupil will go to work. Self respect will compel him to work. In your method, appeal to the man that is in the boy. There is an undeveloped man in every average boy. The average boy has brains and honor. Reach his honor through his brains. You cannot reach either through cheap devices or through his skin.

¹⁶ "Picking" at pupils—telling them to "sit up," "to keep quiet," "to study"—does little or no good. In a short time the disregard for the oft repeated injunction is seen in increased restlessness and disorder. When pupils learn that the injunction is only formal—a sort of habit—they do not even hear it, for pupils hear only what has meaning. The remedy is in the teacher—in the recitation. Get the pupils to work, and there will be little use for phrases which only irritate. Or, stop the recitation, say nothing, and stand still until the room is quiet. Stop the work of the school whenever necessary to give meaning to your general regulations. A teacher who cannot command and maintain order is a failure.

¹⁷ Teacher, seldom or never repeat a question or the assignment of a lesson. Once is enough. By repetition you encourage the habit of inattention, increase your own work, and consume time. Give your pupils to understand that you must have their attention. Do not permit them to trifle with you nor with themselves.

¹⁸ Pupils should not be permitted to leave their seats during school hours for imaginary wants or for trifling needs. Their wants will usually keep until recess or noon. Only for a real want or urgent necessity should a pupil be permitted to leave his seat while the school is in session. Every time a pupil leaves his seat or crosses the room he disturbs the entire school.

¹⁹ If a teacher cannot govern a school without daily recourse to some form of physical force, he is a failure. The fear of punishment cannot long control children. Brute force is a questionable agency in the government of humanity. The frequent use of the rod is a frequent acknowledgement of natural unfitness. Without discipline, firm but kind, a school is but a school in name. Without the discipline which inclines an attentive ear to the voice of the teacher, instruction is fruitless. Without the quiet which invites thought, the school is but a farce. The price of proper school discipline is constant vigilance on the part of the teacher. Purpose, energy, and tact are always combined in successful teachers.

²⁰ Spasmodic teachers cannot govern children. Energetic, methodical persistence is the key to success in the school room. Pupils readily recognize just what a teacher is and govern themselves accordingly. Correcting a pupil occasionally will not dislodge his bad habits. Pupils do not respect spasmodic efforts to govern them. Persistency of purpose distinguishes the successful teacher from the failure. If you would dislodge a bad habit, you should always oppose it.

²¹ It is a sad sight to see an untrained boy or girl, fresh from some traditional high school or quack normal school, trying to instruct children. Without the slightest idea of how children are governed, they resort to force to cover their unfitness. With but a scanty knowledge of the subjects they are called upon to teach, their instruction is timid and soulless. But human nature is so self-helpful, so assertive, so divine, that it will unfold and develop notwithstanding the obstacles frequently put in its path. Teaching school requires the whole of a man or a woman: boys and girls are not large enough to teach others. The teacher needs the enthusiasm born of purpose. He needs the zeal of a lover. He should feel that his work is a necessity and that he is indispensable. The man who succeeds, feels that he has a mission to fill.

²² If inexperienced children are to have places in our schools as teachers, they should be assigned to the upper grades. Many can teach pupils who are old enough to help themselves, but few can teach children in the primary grades. The more a pupil can help himself the less he needs a skillful teacher.

²³ A real teacher never fails to leave an indelible impression upon every pupil he instructs. Pupils grow to believe and to act like their teachers. It is a real thing to teach school. No other work is so important or so complex as the work of the teacher; no other work requires a maturer mind, a clearer judgment, a more perfect self-control, or a larger knowledge of human nature. No other profession demands so much of its devotees. No other calling requires so many eyes, so

much patience, so much perseverance, so much faith, so much love. The mother and the teacher are responsible for the man. Teacher, do you feel that you are building for the future? Do you know that the habits which children acquire under your direction, or by your permission, usually accompany them throughout life? Do you know that the ideals formed in early life lead to success or failure in later life?

²⁴ Teachers should ever be students. No teacher can succeed who is content to remain in a state of rest, or who stops to ask the cost of his labor or what will be his reward. The world owes nothing to its contented men and women. Contentment means decline. The only way to do well is to strive to do better. This law of growth through striving is as universal in its application as the law of gravitation. A teacher without an ideal—an ever movable ideal—is intellectually, if not morally, dead.

²⁵ Attention, attention, attention. Teacher, if you cannot get the attention of your pupils, you cannot teach them. Without the ability to secure and retain the attention of your pupils your work is worthless. The pupils' attention you must have. Get it. Get it in some way. No one can tell you just how you can get it. Personality is greater than method. If all of a class attend, each pupil recites the entire lesson. Only those pupils who attend are really present; the inattentive are practically absent, present yet absent. Without attention, there can be no perception; without perception, there is nothing to remember; hence there is no advancement without attention. The art of teach-

ing is the art of getting attention. Giving attention is acquiring knowledge. Though a teacher possess all knowledge and speak with the tongues of men and of angels, if he has not the tact which secures and retains the attention of his pupils, he is a school room failure. Without the indescribable art which holds the attention of pupils, instruction is in vain; the work and the prayers of the teacher avail nothing. Without the tact, the earnestness, the enthusiasm, born of developed purpose, a teacher cannot reach the heads and the hearts of children. _____

²⁶ Teacher, you can by tact, patience, and methodical perseverance get most of your indolent pupils to studying by requiring them to revise every careless, inaccurate, or wordy statement or explanation. You can generally compel an inattentive pupil to become attentive by requiring him to exhibit himself at every recitation—by leading him to see himself as the studious pupils of the class see him—by being firmly and uniformly exacting with him in all he is called upon to do. Train yourself to see your pupils. A glance of the eye should cause every wandering pupil in the room to return to his work. Teach pupils that you are ever on the alert. _____

²⁷ The pupil must give attention to one thing at a time, if he would acquire lasting impressions. The clearest images and the deepest impressions are made when the mind is concentrated upon a single object or thought. The greater the number of objects simultaneously in consciousness, the less distinct the impression of each. The clearness of an impression depends upon concentration of attention upon a single thing. The strength

and durability of a perception depends upon the quality of the attention which occasioned it. We may perceive so feebly that the impressions will become confused with other feeble impressions and soon pass out of consciousness. It is thus clear that dissipation in teaching means a confusion of impressions and little advance in mental power or knowledge. Pupils may recite the same lesson several times and not intellectually perceive a single principle in it.

²⁸ Clearness of statement is evidence of culture. The mere ability to state a fact in careless or slovenly English does not suggest culture nor learning. A large majority of text-book facts are valueless in themselves; they are means to an end. That end is training in habits. Clearness of expression in the statement of a fact or in the analysis of a sentence or a problem, has a greater intellectual and moral value than the mere acquisition of the text-book fact. The parrot-like recitation of facts in the language of others is not significant.

²⁹ A feeling recognition by the teacher that his methods are founded upon correct principles does much to sweeten his labor and to strengthen his faith in himself. The inspiration which yields success in the school room is born of intelligent aims.

³⁰ Attention to little things often distinguishes the successful from the unsuccessful teacher. The former sees, the latter does not; the former hears, the latter does not. The former is sympathetically exacting, the latter is indifferently exacting. One is positive and uniform; the other passive and spasmodic. Teachers should

train themselves to see and to hear because "we see only what we have been trained to see" and "we hear only what we know." A teacher should be all eyes, all ears, all earnestness, all purpose. The sum of many little things in school work is success or failure.

³¹ In a school of thirty or more pupils, but little time should be given to individual instruction. With the exception of an occasional hint, the instruction should be class instruction. In classes, pupils teach each other. If several pupils are required to illustrate a principle or to state a text-book fact in their own language, each one will get a wider view of the matter than when taught alone. Class recitation gives each pupil in the class an opportunity to measure himself with every other pupil in the class. It gives the teacher an opportunity to grade his pupils and to draw upon each for all. In class instruction, the teacher is less apt to *tell* than in individual instruction. A class does not so directly ask for help as an individual. Individual instruction tends to destroy the pupil's self-reliance. If help can be had for the asking, the pupil will often get it when he should not receive it.

³² Never have pupils recite consecutively; that is, in the order in which they sit or stand during the recitation. Never do anything in a routine way. Keep each pupil in the class constantly on the alert by tact in your method. Be always new, yet always the same.

³³ "Roy, you may read that again. Now be careful about calling the words." Thirteen words—quite a lecture. Only two were necessary. "Roy," to call

his attention, and "again," to call upon him to correct his mistakes. Fully one-half of the teacher's talk is a trespass upon the pupil's time.

³⁴ The little word *again* may be made a very helpful word in the school room. If properly used, it will save much unnecessary talk on the part of the teacher and much time for the pupil. When a pupil blunders in reading, mispronounces a word, makes a statement in slovenly English, or uses twice as many words as he should use in making an explanation, the teacher should say "again," just one word, and the pupil should try again. Why should the teacher say "John you may recite again," or "Mary you know better than that." The persistent use of "again" will do more for a pupil than a scolding or a lecture. In this way every recitation may be made a valuable language lesson—a training in the use of language. The liberal use of this little word will do more toward teaching the use of good English than high-school rhetoric in later years.

³⁵ A pupil should not be permitted to begin his recitation until he is in proper position. "Position"—just one word—should adjust a pupil. "Position" is more concise and personal than "stand away from the desk," "stand in the middle of the aisle," "hands out of your pockets," "look at me," and many other traditional school room phrases. One word, "position," should correct all improper attitudes. Insist upon position until it becomes a habit. An occasional position will not establish a habit. The persistent use of the two little words "again" and "position" would save

teachers three-fourths of their unnecessary talk, save time, and encourage quiet and industry on the part of pupils. Teachers should teach brevity and quietness by being brief in statement and quiet in movements.

³⁶ Such stereotyped commands as "Take your places quietly" and "See how quiet you can be to-day," make little or no impression upon pupils. Without vigilance, teachers will, unconsciously, grow into routine habits of speech and action. Without an ever-present high ideal, human nature tends to automatic conditions. It requires inspiration and purpose to keep awake.

³⁷ "Be careful of your commas to-day" was the warning given a second reader class before the recitation was commenced. The pupils did not even hear the warning. If it reached one ear, it passed right out of the other. It took time to utter it, and the utterance disturbed the whole school. It was silly.

³⁸ Fully one-half of the movements of pupils and classes should be indicated by a motion of the head or the hand. Every movement that can be indicated by a sign or a gesture should be so directed. Fully one-half of the oral commands should be avoided. Quiet not only saves time, but it induces thought.

³⁹ One tap of the bell or a motion of the hand or the head should call a class or dismiss a room. A pupil should take his seat as soon as he reaches it. He should not be required to stand until all the class are ready to sit down or for a signal from the teacher. A movement once indicated by the teacher should be completed by the pupils without further notice.

⁴⁰ While hearing a recitation, the teacher should remain in about the same position, that he may give undivided attention to the work of the class. Moving from place to place not only disturbs the pupils, but prevents the teacher from concentrating his attention upon the class. Restlessness of body disturbs the mind.

⁴¹ A teacher should never permit a pupil to annoy him with questions while he is hearing other pupils recite, or is otherwise engaged. Pupils should ask all questions during recitations. Teachers should not encourage pupils to seek individual instruction; it lessens the value of the recitation. Pupils should be trained to look to the recitation for answers to questions and for explanations of difficulties.

⁴² Teacher, train yourself to see and to hear more, that you may see and hear less. Teachers who can see only one pupil at a time and only part of him should not hope to govern a school properly, or to hold the attention of a class. Seeing pupils is an art. They should be seen all the time, yet not watched. As you learn to see and to hear, your pupils will learn to do. Thus by training yourself, you train others. The inability of teachers to see and to hear things is the cause of many failures.

⁴³ Pedagogically wise is the teacher who sees even a glimpse of the great truth that telling is not teaching. Telling implies mental activity on the part of the teacher only. The pupil may be merely a passive listener; he may not even hear the teacher. Teaching implies mental activity on the part of the pupil as well as the teacher. To teach is to develop, to awaken, to

cause a pupil to think, to help him to help himself. Telling merely fills a pupil with facts; teaching leads him to discover his own facts. "Gifts do not enrich." Real wealth is an acquisition.

⁴⁴ The child begins to acquire his school habits the first day he goes to school. From the hour he enters the school room he is trained by teacher and pupils. In a very large measure their habits become his habits. At any age we are influenced by our associates, but the child of six years is so impressible, so imitative, so unsuspecting, so believing, that he is little more than putty in the hands of others.

⁴⁵ The cost of undoing the bad habits which pupils acquire while in charge of incompetent or indifferent teachers is known only to those who know something of the tenacity of habit. Some teachers permit pupils to become so listless and inattentive that when they are promoted to a higher grade, they cannot do the work of the grade. If the work of each grade is not correctly and thoroughly done, there is great injustice done the teacher in the next higher grade. Teachers who cannot or who will not do the work of their respective grades should be dropped from the pay-roll. The superintendent who is too timid to superintend should seek a place where compromises do not ruin children and rob parents.

⁴⁶ Teachers should ever bear in mind the fact that the primary function of the school is the training of pupils in correct methods of study—that but few of the textbook facts learned in schools are remembered one year, and that fewer still have any value as knowledge.

Until a pupil acquires the study habit, he can make but little progress in his studies. Teacher, you can help him to acquire the study habit only in one way—by interesting him in the work of the school.

⁴⁷ Many teachers try to make everything easy for their pupils. Teachers may make their schools pleasant, but they should never try to make them easy places. There are no easy places in this world. Breathing teachers do not seek easy places for themselves or their pupils. Only the "living dead" seek ease. Young man, if you want an easy place, do not try to find it in the school room. Leaders are workers. If you want to sit in a chair and dream, children should not be made the victims of your indifference and unworthiness. If you do not feel the responsibilities of a teacher's work, enter some profession where less of purpose, energy, and honesty is required. If you do not really love children, enter some work where less of sincerity and genuine humanity is needed. If you are teaching for "pin-money," find some place where your services will prove less disastrous.

⁴⁸ Formal routine is not experience; it is too mechanical. The work of a teacher is real work. It demands the earnestness and enthusiasm of an idealist. Wakefulness on the part of a teacher is necessary to success. No one succeeds in any work by simply hoping, praying, and weeping. Physical, intellectual, and moral growth is the result of physical, intellectual, and moral activity. Mere belief in dogma, sound or unsound, never awakened a sleeping soul or aroused a dull boy. Purpose and enthusiasm are the conditions of progress.

⁴⁹ The tact, the patience, and the persistence required to govern and instruct forty or fifty children six years old are found in but few families. The successful primary teacher is a special creation. She cannot be made to order in Normal schools nor anywhere else. No amount of pedagogical patience and skill can turn nature out of its own direction. We can cultivate only what we have; we cannot create. Training cannot complete what God did not begin. Success in any department of life depends upon natural fitness. It is the result of normal conditions. Tact, energy, and enthusiasm are the distinguishing characteristics of the successful primary teacher. More is required of teachers in the primary than in the grammar grades. As pupils become self-helpful, tactful teachers become less necessary.

⁵⁰ The weaker the teacher, the less he feels the responsibility of his work, hence the more he sits and dreams. During recitations, teachers of all grades should make sitting the exception and standing the rule. Training pupils to think requires breathing teachers. To teach a pupil is to lead him to think, to feel, to do.

⁵¹ The mind is not satisfied with the recitation of the words of others. Learning alone does not satisfy the cravings of the soul. Only that which is acquired by the mind's own activity improves and strengthens it. Teacher, if you are a routine recitation hearer, get rid of the habit at once. A lifeless recitation of dead textbook facts carries with it a deadly poison. Independent thinking on your part will lead to independent thinking on the part of your pupils. My young friend,

think these thoughts until they become your thoughts. They will inspire you, lighten your labor, and bless your pupils.

⁵² Many teachers attempt to teach so many facts in a single lesson that there is little or no concentration of mind on the part of the pupil, hence the impressions are indistinct and transient. Teacher, be definite in your aims; select the important fact or principle and emphasize it; see that the class follows you and understands you. It is clear seeing and deep conviction that give life meaning.

⁵³ Many teachers are ever too ready to help their pupils over every difficulty—over the very obstacles which they should master unaided that they may learn to rely upon themselves. Many teachers give too many helpful suggestions—suggestions which almost tell just what the pupil should find out for himself. Teaching which makes school life easy for the pupil is destructive teaching. It robs him of his opportunity and gives him a wrong impression, not only of school life, but of life in general. When a teacher feels that he should help a pupil, he should not do so directly. He should lead the pupil slowly and cautiously by means of suggestive questions to help himself out of his difficulty. The tactful teacher—the real teacher—seldom finds it necessary to do anything for a thinking pupil.

⁵⁴ Pupils should not be expected to master school textbooks. They should not be required to work all the problems in the traditional arithmetic, to recite all the facts and dates in the histories, nor to answer

all the questions in the catechism geographies. At least half of the time in many schools is spent upon detail which has no value as a means of training or as knowledge. It cannot be remembered and would be valueless if it could be. Why then teach it? Habit, is the only answer.

⁵⁵ The teacher who has not thoroughly prepared the lessons for the day cannot be a leader in any proper sense. What a teacher knows superficially, he teaches superficially. Scanty information upon a subject makes a teacher timid. Timid teachers make uncertain pupils. Vague, indefinite instruction leaves vague and indefinite impressions.

⁵⁶ Interest in school work cannot be developed by the pouring-in-method of teaching nor by sleeping teachers. Teachers are helpful only to the extent that they lead pupils to help themselves. The teacher who tells a pupil anything that he should draw out of the pupil, is a hindrance rather than a help. Interest in school studies is a mental state due to habits of voluntary attention; it cannot be developed by routine recitations nor by telling teachers. Surface exhibitions cannot long interest pupils. Mere formality does not arouse the soul.

⁵⁷ Knowledge cannot be poured into a pupil's head as peas are poured into a pot, hence telling is not teaching. To educate a child is to do more for him than merely to cram him with text-book facts; it is to train him in correct habits, moral, intellectual, and physical. Knowledge is not a gift, but an acquisition. All that

a teacher can do is to arouse mental activity and lead the pupil to desire knowledge. The pupil must supply the desire.

⁵⁸ Teacher, distinguish between the useful and the useless in teaching arithmetic, geography, history, and grammar. A knowledge of the useful is the need of nine-tenths of our pupils. Pupils should feel that they know the essential facts, the useful facts, of the common branches.

⁵⁹ Teachers must govern as well as teach. A school without order is a school without purpose. Order invites the mind to work; disorder prevents it from working. Quiet induces study; noise prevents study. The tact which governs is as essential as the ability which instructs. In many schools the discipline is so spasmodic, the instruction so indefinite, the attention of the pupils so irregular that but little progress is possible. That the pupils make any advance is a compliment to human nature.

⁶⁰ Put your indolent, restless pupils to copying selections from their readers or histories. Require them to copy the same selection until it has been neatly and correctly done. Do not worry about the amount of work the copying requires of them, nor the long quiet which accompanies the exercise. Few other school exercises will do as much for pupils in the acquisition of good English and the study habit.

⁶¹ Where corporal punishment is still the last resort, its administration should be carefully considered. It should never be inflicted immediately after the offense.

Punishment must be judiciously and deliberately administered to be effective. I suggest that the infliction of all forms of corporal punishment be deferred until the day after the offense. All kinds of school offenses should be met by the teacher in a firm and kindly spirit—never harshly. “The mild power cures.”

⁶² Pupils should not be detained after the regular school hours for any cause whatsoever. Detention only irritates them. Idleness cannot be cured by any such cheap device. The only real cure for poor lessons is industry, and the only way to get an idle pupil to study is to interest him. It is thus clear that the remedy for idleness and the consequent poor lessons must be found in the teacher. If the cheap devices of untrained and incompetent boys and girls could change idle and inattentive pupils into studious and attentive ones, the science of education and the art of instruction would be easily mastered.

⁶³ Recess should be short and quiet. In graded schools, one or more teachers should accompany the pupils to the play ground and remain with them during recess. Large numbers of pupils should never be left without a teacher or a monitor in sight. One child alone is usually pure in thought and action, but large numbers of children—children from many kinds of homes—need the constant surveillance of parents and teachers. Thousands of innocent children have been poisoned, if not ruined, by association at school with children from low and vicious homes. One boy or girl habituated to low practices could easily contaminate scores of unsuspecting children.

⁶⁴ Pupils should not be permitted to congregate upon the school premises for play morning or noon. They should pass directly to their rooms upon entering the school yard. The school is in no way connected with the plays of children. It is an intellectual work-shop—a business institution.

⁶⁵ While hearing a recitation the teacher should stand where each member of the class can see him. He should stand still. A walking, restless teacher distracts the attention of the class, also of the other pupils. Moving about divides the presence and the power of the teacher.

⁶⁶ Concert recitation counts for little or nothing. It divides the class into leaders and followers. It masses them. Method should individualize. It denies the teacher an opportunity to know the shirkers and the inattentive. If used at all it should be only on very sleepy occasions.

⁶⁷ A graded school is a series of related steps in which the character of the work done in any grade is seen in the next higher grade. The habits of the pupils in the second grade describe the methods of the teacher in the first grade; the habits of the pupils in the third grade, the methods of the teacher in the second grade, and so on through all the grades. That is, the habits of the pupils in any grade reveal the methods of their last teacher. There is no place in a graded school in which a teacher can hide.

⁶⁸ The length of time required to dislodge a bad habit depends upon the age of the habit and the persistency

of the effort to dislodge it. The strength of an old habit is astonishingly great, hence children should not be permitted to acquire bad school habits in the primary grades.

⁶⁹ The memorizing of thoughts and principles is more valuable than the memorizing of words and sentences. Teachers should seek to associate thoughts and principles according to the laws of association that the pupil may recall them when needed.

⁷⁰ A teacher who speaks in a tone lower than the average will soon have followers among his pupils. Teachers should speak distinctly and with sufficient energy and volume of voice to be heard in any part of an ordinary school room. Pupils of all ages imitate their teachers. Teachers are the pupils' ideals. The habits which pupils form in school usually accompany them throughout life. One correct habit firmly fixed in early life is more valuable than a score of text-book facts. Correct habits are real values. The aim of education is right conduct.

⁷¹ In the first and second grades, the smaller the classes, and the greater the number of recitations in a session, the more rapid the progress. As the attention of young pupils must be secured and retained by the tact of the teacher, it is self-evident that the classes should be small. No teacher can hold the undivided attention of twenty-five children. Her will power and tact will not go around. In the first and second grades, increase the number of classes. It is better to shorten the time for each recitation than to waste all of it. Few teach-

ers can hold the attention of first and second grade pupils longer than fifteen or twenty minutes at one time. The impressions made upon the child depend upon the enthusiasm and the tact of the teacher and the attention of the pupil.

⁷² In all the professions except teaching, incompetency and inexperience are held to be risky and dear without price. Why should the most responsible, the most difficult, the most complex of all professions be made the only exception? There seems but one reply to this question. Obviously it is because the evil effects of the blunderers are not seen at the time by the masses. The pupil does not, at once, show the evil effects of the teacher's improper methods, his ignorance of the laws of mental development and of the subjects taught. The child's mental condition is not even questioned. It is assumed that because his stomach remains fairly healthy, his mind is healthy also. The assumption is usually unwarranted.

⁷³ The cost of incompetent or indifferent teaching can never be definitely known. However, it is known that an incompetent or indifferent teacher robs the pupil of his opportunity, the tax-payer of his taxes, and jeopardizes the standing of the teacher in the next higher grade. What the best teacher can do with pupils depends upon the intellectual condition of the pupils when he gets them. The difference between competency and incompetency—between good methods and bad methods—between the real and the artificial teacher—between the teacher who loves children and the one who does

not love them—between the working teacher and the time-server or salary grabber—can never be fully described. It is too great for description.

⁷⁴ The greater the cripple, the greater the need for crutches; the more incompetent the teacher, the greater his need for text-books—for particular text-books. A teacher should know the subject rather than what a particular author has said about it. If a teacher knows only what one author has written on a subject, his knowledge of that subject is scanty indeed. Inspiring and courageous teaching comes from conscious knowledge of the subject taught. Unconscious incompetency is the mother of a majority of the school room failures.

⁷⁵ Require pupils to correct their own mistakes in the class. Pupils are made alert by knowing that they will be called upon to correct their mistakes. The only safe plan is to call on the blunderer again and require him to correct himself. Make the recitation of each pupil so exhaustive that he will soon see himself. Do not feed him with questions, but draw him out. The teacher who can lead an indifferent pupil to see himself, understands the art of instruction. No pupil was ever awakened from a school house slumber by a telling or talking teacher.

⁷⁶ Experience is valuable only when it is of the right kind. Experience of any kind without the inspiration, suggestion, and guidance of high ideals is always destructive. This self-evident fact is especially applicable to the work of the teacher. Experience is often the greatest obstacle in the way of a teacher's success. Success depends upon ideals.

⁷⁷ There are at least two things no teacher can do. No teacher can teach an inattentive pupil; no teacher can teach what he does not know. Getting along in school work requires attention on the part of the pupil and competency on the part of the teacher. If either is wanting the school is a failure.

⁷⁸ Genuine enthusiasm is born of well developed purpose. It is not spasmodic, nor "puffed up." If a teacher really loves his work, if he really loves his pupils, if he has a deep conviction of the value of education, his enthusiasm will soon bear fruit in the lives of his pupils.

⁷⁹ Success in the school room, as well as elsewhere, depends upon purpose and ideals. The young woman who teaches solely for the pay, who prefers society to the school and a novel to a text-book; the young man who teaches while he studies law or medicine; these cannot, in any true sense, be called school-teachers. Such teachers disgrace the noblest of all callings. Are children but bric-a-brac—souls but things—for the use of insincere young women and selfish and ambitious young men?

⁸⁰ The end sought in school work extends throughout life. The school is only a means to an end. The end sought in the study of grammar is not grammatical facts, but the correct and ready use of words. All need language; few need grammar. The end sought in the study of arithmetic is not answers, but mental discipline in rigid and exact reasoning. Very little of pure arithmetic answers all the needs of ninety-nine in one

hundred. The end sought in the study of geography is not a memory crammed with dead geographical facts, but an imagination filled with living pictures of the earth's surface.

⁸¹ Extended discussions of topics not properly related to the subject of the lesson, weaken the recitation. Teacher, drill on one thing at a time. If you must talk, talk about the essential and distinguishing point in the lesson. Make *it* clear.

⁸² The more methodical, persistent, and exacting your instruction, the shorter the time required to establish the study habit in your pupils. Pupils must be induced to study; teachers must work. The average pupil can think and will think, if approached in the right way. Lead him, but do not do for him.

⁸³ Teach the concrete before the abstract in language. Begin with the sentence. Whole things are more easily and clearly understood by children than parts of things. To a child a sentence has meaning; a part of speech has not. Begin with familiar sentences and inductively find the parts of speech and their definitions. Let the pupils make the discoveries. Put little faith in the mere recitation of text-book facts.

⁸⁴ Education begins with sense-perception. The early and methodical training of the perceptive faculties enables one to appropriate more of the material world than he could do without such training. The earlier a child is trained to see, to hear, to feel, to classify, the earlier its real life begins. Training, in its true educational sense, means experience.

⁸⁵ The child's world is the material world, hence teachers of primary grades should illustrate abstract truths by means of objects. At all ages, illustrative teaching is more interesting to the pupil and makes more lasting impressions upon him than the abstract recitation of text-book facts. Percepts formed through the senses are more lasting than those formed through verbal description alone.

⁸⁶ The one aim of school life is character, the development of the child into a self-reliant personality. Teaching which does not incline the pupil to think for himself upon all subjects is indifferent teaching. The teacher who is fettered by tradition cannot lead pupils to independent thinking. Only the free can lead others to freedom. Only to the extent that a teacher is free from traditional beliefs and prejudices is he free to seek truth and to lead his pupils to seek truth.

⁸⁷ Music should be taught in all schools. No other school exercise carries with it so much of the moral power of education; no other so thoroughly unites a grade of pupils in one concentrated effort; no other so thoroughly teaches pupils the value of attention and interest in their school work; no other exercise, especially in the lower grades, so thoroughly awakens and inspires sleepy and stupid pupils. To sing fifteen or twenty minutes is to exercise both body and mind for that length of time. The exercise is almost equal in benefits to an orderly recess of the same duration.

⁸⁸ How much a quiet teacher governs her school by example is one of the mysteries of the school room. A

pleasant, clear, moderate tone of voice compels not only quiet but attention. A gesture is often more effective than an oral command, for it carries with it the idea of quietness. Quiet induces quiet.

⁸⁹ Introduce a new subject in a plain, illustrative talk, before assigning a lesson in the text-book. Be in no hurry to get pupils into text-books. Acquaint them with the nature of a subject before you ask them to apply its definitions and rules. Interest pupils first; drill them in the use of the facts afterward.

⁹⁰ Merely hoping and trusting will no more get results in educational work than in any other work. Ceaseless effort is the price of results. Pupils should be kept busy; they should be given all the work they can do. Industry is essential to interest; interest is the condition upon which progress depends. Lack of interest on the part of pupils is usually due to a lack of energy and interest on the part of teachers.

⁹¹ Questioning pupils upon their lessons during the recitation is an art—an undiscovered art in too many schools. Questioning is not telling. Proper questions should lead the pupil to tell—to think. Telling licenses him to sleep.

⁹² The time spent in class criticism by pupils is almost wholly wasted. Require the pupil who blunders to correct himself. Occasionally a pupil might be heard in criticism, but only occasionally. The word "again" is the best class criticism.

⁹³ Is it not time to drop the belief that the average pupil cannot think, that he is merely a machine, that he must be directed by telling teachers and dead authors, that he must study arithmetic by cases, rules, and formulas? Pupils are underrated. A pupil's explanation of a problem in arithmetic or a fact in geography or history is often clearer to his classmates than the teacher's, because the simplicity of the pupil's language gives his classmates a clearer and completer view of the problem or the fact. Thus pupils often teach not only their classmates but their teachers.

⁹⁴ What a pupil can do in the second grade depends upon *how* he did the work in the first grade. What a pupil can do in the third grade depends upon *how* he did the work of the first and second grades. What a pupil can do in any grade above the first depends upon *how* he did the work of the grades he has passed—*what* depends upon *how*. If the work in the eight grades of a graded school has been properly done, the average pupil is fairly well qualified to meet the realities of life in the struggle for bread and clothes. If a pupil has been properly trained in the common school to rely upon himself, he will find opportunity to extend his learning after he enters the world of business. But if his school days were spent with routine teachers, he will probably go through life content with the daily newspaper and the cheap novel. "As the twig is bent, the tree is inclined."

⁹⁵ Correct teaching seldom goes beyond suggestion. Direct help is usually destructive help. Correct teaching carefully notes a pupil's ability and furnishes him

with all he can do. It makes haste slowly. It converts learning into knowledge. It recognizes the fact that only what is understood and related is useful. Correct teaching corrects bad physical habits and improper language whenever seen or heard. It finds and connects causes and results and shows that meaning depends upon relation. It recognizes the fact that a teacher's work is an all around work—that the whole pupil should be trained in all that truly tends to educate him.

⁹⁶ Clear teaching flows from a clear head and a warm heart. Muddy and wordy illustrations by the teacher cannot convey to the pupil clear ideas. Teacher, you should feel that you know. The sympathy of your pupils will enlarge your gifts and lighten your labor.

⁹⁷ Teaching children requires some knowledge of the laws which govern mental growth. A real teacher is one capable of reproducing in the minds of his pupils his own ideas and mental pictures. He is able to lead his pupils to see things as he sees them. He is able to help them to make more of themselves than they would without his guidance and to accomplish the work in less time. No teacher can do more than lead a pupil to help himself; no teacher should try to do more.

⁹⁸ Method inspires or stupefies. Under the misdirection of some teachers, children acquire mental habits which lead them to dislike books. The teachers put them to sleep. Teacher, are you mentally and morally awake? Have you convictions of your own, or are you a mere believer—a mere follower of others? You need more

than belief; you need conviction; you need more than conviction; you need the courage of conviction. Teachers without the courage of conviction may keep school, but they can never stimulate mental activity in children.

⁹⁹ The number of "bad boys" in a room, in the first four grades, depends almost wholly upon the kind of teacher in the room. Where competency is in charge, superintendents hear little about "bad boys" who are only eight, nine, ten, or eleven years of age. When a teacher complains of the conduct of pupils in a primary grade, she confesses her unfitness—confesses that she lacks the energy, tact, and presence which govern children. Sitting teachers, dreaming teachers, telling teachers, always have "the hardest rooms in town." If the pupils are restless, idle, and mischievous, the teacher is usually responsible.

¹⁰⁰ Competent assistants govern their pupils. They do not annoy the principal and the superintendent with the details of their work. Superintendents and principals cannot prescribe specifics for any school disorder. They cannot supply a teacher with energy, tact, or perseverance. In the lower grades the chief cause of failure is want of energy and methodical persistence. Persistence in correct methods always yields satisfactory results. Success everywhere is a personal result.

¹⁰¹ Teacher, trust yourself to govern your school. Lean on purpose and tact rather than upon the principal and the superintendent. You are *the* responsible one. You cannot shift upon any one else the responsibility which your duty demands of you. If you do not love to work

yourself, you cannot get your pupils to work. You cannot inspire them by acts of pretention. You cannot hide your real self. Insincerity is written in every insincere face.

¹⁰² As teachers learn how to interest pupils in the work of the school, incorrigibles "cease to do evil and learn to do well." The teacher who believes in the total depravity of human nature seeks to hide his own incompetency and unfitness in the hereditary nature of his children. Teachers who do not believe in children should not be placed in charge of them. Teachers who believe in the love which comes through fear know little of history and less of sound pedagogic principles.

¹⁰³ The inspiration which leads school children into studious habits is born of character, purpose, and energy on the part of the teacher. A working teacher soon has a working school; a mere school-keeper, an indolent and noisy school. Anybody can sit in a chair, call classes, and hear pupils recite text-book facts, but such soulless routine is not training pupils to think for themselves. If pupils learn in school only to believe, the school is but a school in name—a legal formality. The contented teacher is a decaying teacher. Intellectual and moral contentment means intellectual and moral stagnation. The teacher who has realized his ideal school should quit the school room. He should seek the grave, or some vocation where his ideas of life would work less injury than in the school room.

¹⁰⁴ Presence speaks. Children six years old recognize the quality of a teacher's presence. They are seldom

mistaken in what a teacher's face expresses. A passive and characterless expression means easy discipline and indefinite and soulless instruction. A slow and labored bodily movement encourages like movements on the part of pupils. Enthusiasm, mental and physical, produces enthusiasm, mental and physical. All successful teachers are quick, earnest, and positive, in speech and action. A successful teacher is an idealist.

¹⁰⁵ The habits acquired by children in school usually bless or blight their entire lives. Methods of instruction encourage or discourage mental growth. A pupil's mental condition when he quits school depends largely upon how he was trained when in school. His "schooling" may have been his one great misfortune. Some pupils almost lose their minds while in charge of incompetent and indolent teachers. A mind naturally active requires exercise—exercise which will strengthen it. If it is not properly exercised it will fall asleep. If it is not supplied with stimulus of the right quality it will become atrophied. The law of growth is a simple one—use gives use.

¹⁰⁶ Children cannot be governed by brute force. Whipping pupils is a cheap device in which incompetent teachers hope to hide their own weaknesses. Without proper government there can be no instruction. Public schools cannot undertake to rear children. They cannot undertake to make good the shortcomings of homes in which the parents have no control over their children—in which profanity, obscenity, brutality, and drunkenness are daily exhibitions. In a well governed school, the pupils are equals. Each pupil is, morally and legally,

entitled to his or her part of the teacher's time—to an equal part of it—no more. No teacher should permit an idle, street-bred boy to rob thirty or forty well-meaning pupils of their opportunity. If a boy cannot be governed without the constant vigilance of the teacher, he should be suspended. Suspension is the only proper remedy.

¹⁰⁷ The manner in which pupils do their school tasks describes the teacher. The manner in which pupils express themselves speaks volumes for or against the methods of the teacher. Teachers are ever on exhibition. The ideal school, good or bad, is seen in every thing the teacher does. The manner in which the mechanical work of schools is done needs more attention than it usually receives. It should be neatly done. Every lesson should train the pupil in several things at the same time. Lessons are means to an end—only means.

¹⁰⁸ Ideals are formed by comparing things of the same kind. An ideal school is formed by comparing schools. A school is good only when compared with other good schools. Method is good only when compared with other good methods. A teacher is a success or a failure only when he is compared with successful teachers. Hence teachers should visit schools, study books on teaching, and read school journals.

¹⁰⁹ Teacher, if you lack the power of presence, develop it; if you lack vigor of speech, acquire it; if you lack energy of bodily movement, develop it; if you lack enthusiasm, generate it; if you do not love children, quit teaching school.

¹¹⁰ In a room seating more than thirty pupils, there should be three classes: a C class, a B class, and an A class. Pupils should be promoted from the C class to the B class, from the B class to the A class, and from the A class to the next higher grade whenever the work of their classes or grades does not tax them with all they can do. This classification of a grade or of a room not only offers the classes the best opportunity for promotion, but it also offers the individual pupil the best chance for advancement.

¹¹¹ In the primary grades pupils should make statements and answer questions in concise, complete sentences. Recitation in the form of complete sentences leaves a clearer and deeper impression in the mind of the pupil than recitation in the form of words and phrases. It requires closer attention and carries with it greater interest and feeling. The manner in which a pupil does his school work measures the value of his opportunity. Training in its true pedagogical sense is helpful; mere recitation, hurtful. The mere recitation of the language of a text-book cannot develop thought power, nor cultivate self-reliance. Teaching which does not train a pupil to believe in himself has little intellectual value. Training in expression should constitute a part of the teacher's work in every school exercise below the high school. Exact teaching cultivates clear thinking and exact expression on the part of pupils. Indifferent teaching encourages in them muddy thinking and slovenly expression. Pupils consciously and unconsciously imitate their teachers. The teacher is the pupil's ideal.

¹¹² Pupils should not be permitted to hesitate when called upon to recite. They should not be permitted "to get their lesson" in the class. They should go to the recitation fully prepared and should respond to questions readily and cheerfully. Pupils should be trained to recognize recitation hour as the most important hour of the day. Each pupil of the class should be called upon to do his part of the class task; each should be required to exhibit himself. If a pupil hesitates and blunders, stop him and call another pupil. Do not wait upon the blunderer; do not help him; do not lecture him, but quietly call another pupil. Give delinquents another chance to recite, but do not scold them. A recitation is strictly a business affair and should be conducted in a business manner. The recitation should have a moral as well as an intellectual value. It should teach pupils that "Life is real; Life is earnest." There is no room in school exercises for any form of sentimentalism. Energy, enthusiasm, tact, dispatch, and impartiality, should characterize every recitation. Wakefulness on the part of both teacher and pupils is a necessity.

¹¹³ The masses still believe that anybody can teach school. They confess that the lawyer, the minister, and the physician should be professionally trained, but not the teacher. They believe that the watchmaker should serve an apprenticeship under skilled workmen, but not the teacher. Now the mechanism of a watch is simple when compared to the complex mechanism of the mind. The study of the mind of another is a subtle art. The complex character of the teacher's work

is known only to those who have made a study of the science of education and been properly trained in the art of instruction. A teacher, ignorant of the laws of mental development and of child nature is, at best, a mere peddler of text-book facts. Teaching is more than recitation hearing. Any human machine can hear pupils recite the words of a text-book, but it requires a teacher to train pupils to think.

¹¹⁴ In the selection of teachers great care is due children, tax-payers, successful teachers, superintendents, and incompetent applicants. Great care is due children, for the school is their opportunity; great care is due tax-payers, for they are entitled to the best schools their taxes will provide; great care is due successful teachers, for they should not be compelled to compete with incompetent applicants; great care is due superintendents, for they should not be subjected to unfriendly criticism from incompetent teachers and their friends; great care is due incompetent applicants themselves, for it would save them the humiliation of failure; great care is due every school interest, for nine-tenths of all school difficulties in the management of schools arise with incompetent teachers.

¹¹⁵ In the selection of teachers greater care is demanded than in the selection of any other class of public or private servants, on account of the nature and the character of the teacher's work. Every reason which can be assigned for the establishment and maintenance of schools, is also a reason for exercising the greatest care in the selection of teachers. I am strongly in favor of

"home talent," but not of unqualified home talent. Home is often a very narrow conception. The only way to improve the quality of "home talent" is to throw open the school-houses to outside talent. The sentiment which cries "home talent," qualified or unqualified, is generated in a thimble.

¹¹⁶ The school fund is distinctly the children's fund. It is levied and collected for the benefit of children, hence it is clearly the most sacred of all funds. Not one cent of it should ever knowingly be paid to an incompetent or indifferent teacher. Competency, character, faithfulness, duty done, constitute the only basis for the selection of teachers, as well as the only ground for their continuance in the schools.

¹¹⁷ The schools belong to the people. School boards do not have either the legal or the moral right to temporize with the rights of children in the interests of individuals. The public school fund should not be used as a charity fund for needy families. Personal sympathy should not influence official action. Schools have a much higher and holier mission than charity. Children are entitled to the best opportunities suggested by the law. The inalienable rights of the poorest child are as sacred as those of the wealthiest.



PART SECOND.
SPECIAL SUGGESTIONS.

A genuine interest in problems of education helps to keep us young, for it carries us back to our own spring time and to the company of children. It is also an evidence that we ourselves have not ceased to grow, and are therefore not yet old.

BISHOP OF PEORIA.

J. L. SPALDING.

READING.

First Step.—Use symbols or words for ideas already in the child's mind. Associate the object with the word until the recalling of one suggests the other. You cannot teach words which do not symbolize ideas already in the mind of the child. Concepts are represented by words—by common nouns; but these words are meaningless until they awaken in the mind of the child corresponding mental images acquired through sense perception. That is, teachers cannot give pupils ideas at any age. Instruction may awaken and enlarge what the mind has already acquired by its own activity; it cannot create anything. A clear recognition of this psychological fact is the beginning of success in teaching.

Charts containing pictures of familiar objects, and the objects themselves, aid in associating words and ideas. Make much of the illustrations on the charts and in the primers. Be in no hurry to get pupils to reading in formal classes. Train the six-year-old to see the many things in the pictures; then require him to tell you what he sees. Make the lesson a language lesson. The use of words which carry with them pictures and feeling interests children. Strive to reach the child's heart as well as his head.

Present only two or three new words at a lesson. Write the new words on the board and see that the children learn them. Train the pupil to pronounce the new words readily and correctly. A pupil should not stop to spell the word. He should know every word at

sight before he attempts to read the story. Drill, drill, drill on the new words. A pupil must see, spell, and pronounce a new word several times before he acquires a lasting image of it.

Review frequently. Occasionally require a pupil to read the whole "story." Question the children about the "story"—the pictures, their experiences, etc., etc. Get near to the children, the nearer the better.

Second Step.—Sight reading, or recalling at sight short sentences as wholes. Children should be trained to see sentences as wholes, to name the words without hesitancy. If a pupil hesitates, his reading is not reading, but measured word-calling. Pupils should not be permitted to read a lesson aloud until the new words and the new illustrations have been studied and mastered. No one can give proper expression to words whose meaning he does not understand. Correct expression depends upon correct interpretation. Seek quality rather than quantity in the reading exercises. Train pupils from the beginning to seek the thought. This you can do if the thought is within their grasp.

Third Step.—Reading to learn is naturally the next step in reading. A child must first learn to read, then he should be trained in getting thought from the printed page. In the more advanced reading exercises, the pupils should understand the subject of the lesson before they are required to read it aloud. They should understand the meaning of the prominent objects mentioned and facts stated before they attempt to express the thought of the author. That is, the lesson should be studied by the pupils and by the teacher before it is used in a reading exercise.

Teach one thing at a time. If proper emphasis is the thing sought, let it be the only thing; if inflection, let it be inflection only; if naturalness of tone, train the pupils in that alone. One principle at a time until each of the more important principles is mastered, then train the pupils to observe all of them in everything they read. In most schools little or no attention is paid to emphasis, inflection, or rate. The reading habit, good or bad, is acquired during the first four years. Pupils should learn to read in the primary grades.

Combine the alphabet, the phonic, the word, and the sentence method. It requires the combination of all methods to make the best method. There is no one best way of doing anything. Success is the best way. No one has a monopoly of brains or correct methods. The teacher is the method. The personality of a live teacher is greater than any method. Individual power cannot be copyrighted. Study methods, but be yourself. The conscious imitator is usually an unconscious failure. Man is great, but men are greater.

A pupil learns to read by being drilled in reading. Drill, drill, drill. The primary teacher is little more than a drill master. Every child should read two first readers and two second readers, or the equivalent of two of each. Drilling in what he can understand is his only hope of learning to read with expression and feeling.

Teach reading in all that pupils read. Why observe the punctuation marks in the reader and not in the geography, the history, and the arithmetic? Why permit a pupil to disregard in any study or exercise what he was taught to observe in another study or exercise? Why permit a pupil to revive a bad habit by

indifference? The one virtue in teaching is persistency of purpose. Many teachers fail because they are spasmodic in their efforts. There is an infinity of difference between a well developed purpose and a spasm. One usually leads to success, the other to failure.

The more uniform and exacting a teacher's methods, the less the time and labor required to establish a habit. Habit is the result of methodical and persistent repetition. Education ends in habit. An earnest and persistent purpose is back of every success. God gives nothing for the mere asking. Effort accompanies all successful prayers. "Faith without works is dead."

The only way to teach a pupil to read is to drill him in reading. Drill, drill, drill him until he can recognize and pronounce words without a conscious mental struggle. He should be drilled until he does not stop to think. Teacher, if the reading in your school is soulless, it is your fault. Take a spirited selection and drill upon it until the pupils catch its spirit.

If teachers would interest pupils in a reading lesson, they must be interested in the lesson themselves. Interest begets interest. The sincere and purposeful teacher can become interested in the simplest stories. A teacher can no more interest a class in the first reader without preparation than a college professor can interest a class in the "Binomial Theorem" without preparation. A teacher should be able to give the moral and the spiritual meaning of every lesson, however seemingly plain and simple. He should teach pupils from the beginning that words are only the signs of ideas—that the heart of things is unseen.

SPELLING.

As we spell only when we write, the eye should be trained from the start to recognize the combination of letters which represents the sounds recognized by the ear. As soon as a pupil can write, he should be required to copy the spelling lessons in his readers and spelling books. If he is required to copy his spelling lessons, he will give closer attention to the form of the word than when he merely studies the lesson and spells the words orally. Written spelling lessons are also exercises in penmanship. The written spelling lesson gives the teacher a rare opportunity to train pupils in habits of order, neatness, and promptness.

Spell and re-spell all new words as they occur in each study. In this way spelling is taught with all the other studies.

Spend no time in spelling words which the pupil will seldom or never use. Pay no attention to unimportant geographical and historical names. It is enough that a pupil recognizes them readily in reading.

In the first three grades, or during the first three years of a child's school life, the spelling lessons should consist largely in copying sentences and new words. In this way pupils in the lower grades acquire by imitation the correct spelling of simple words.

Keep lists of words frequently misspelled and make special lessons of them. Concentrate the attention of the class upon the misspelled words; ascertain, if possible, why they were misspelled; call attention to the

very letters in these words which most probably caused the pupil to misspell them; bring into clear consciousness the correct form of the misspelled words.

Spelling is a form study. In the primary grades, especially, the chief reliance is upon the sense of sight. Pupils must acquire correct mental images of words or they cannot recall their correct spelling. Train pupils to *see* words, to see the different syllables of a word, to see the correct form of a word. Train them to pronounce each syllable distinctly and correctly. Require them to commit to memory a few of the rules for spelling; and then drill, drill, drill them in the use of the rules. Require them to use every word in their formal spelling lessons in thoughtful sentences. The use of the word will aid in fixing its form more permanently in the mind of the pupil.

In the first, second, and third reader grades, a spelling book is not needed. The pupils should spell the list of words at the beginning of each lesson, and such other words as the teacher may select from the lesson. The words should then be used by the pupils in original sentences. The nouns should be used as subjects of verbs—that is, the pupils should be required to say something about the nouns and the pronouns. The words thus selected constitute a natural spelling lesson. The mere spelling of a list of words orally counts for little. A pupil's vocabulary is enlarged only by the use of words.

LANGUAGE.

As the object to be accomplished in the study of English grammar is often misunderstood, I submit a few general suggestions in regard to method in teaching English in the common schools.

A teacher should know what he is going to teach and how he is going to teach it before he begins his work. Scanty knowledge of a subject and immature and indefinite methods of presenting it to a class cannot but yield unsatisfactory results. The possible ways of presenting any subject are many. A multitude of earnest, growing teachers are not only adding new methods of presenting text-book facts, but are making new incursions into the field of tradition.

A pupil cannot acquire a correct use of language by studying technical grammar. Until he can think intelligently and use words reflectively, text-book grammar has no meaning to him. A pupil cannot acquire the art of expression by merely reciting the laws which govern the expression of thought. The formal grammar of a language is a science. The study of English grammar, at any age, is only a help to the mastery of good English. Thinking is the only remedy for slovenly language; revision the only cure for verbosity.

Habit cannot be overcome by rules. Rules merely state the well established facts of grammar. The application of the rules depends entirely upon the learner. Good English is not the gift of text-books. Clearness and force in speaking and in writing are acquired only

by practice. The study of the dry facts of grammar can never be interesting or profitable to grammar school pupils. The facts are too abstract. The object to be secured in language-work is facility in the correct use of words. This result can never be attained by the mere recitation of grammatical facts.

Teachers should aim to teach children to express their thoughts in simple and correct forms. But a pupil should never be asked to express himself until he sees clearly what he is asked to say. Accuracy of expression depends upon clearness of thought. The time to correct a pupil's speech is when it needs correcting. Then is the time for a lesson in language. The only cure for the use of bad English is revision until the incorrect statement or illustration is changed into a clean, concise statement. Teachers should constantly bear in mind the fact that one lesson in the reflective use of words in the expression of original thought is worth to the pupil many text-book recitations of grammatical facts.

Pupils should be thoroughly drilled in the use of pronouns. Many of the mistakes in writing and in speaking occur in the use of pronouns. The mere recitation of the grammatical rules which govern their use will not fix the correct forms in the minds of pupils. Pupils should be required to use all the forms of pronouns in sentences, and tell why a certain form was used in preference to another form. In each case he should give the rule requiring the use of the correct form.

Irregular and auxiliary verbs should be treated in a similar manner. The mere conjugation of irregular verbs will not fix the correct forms in the minds of

pupils. They must be led to see their correct use through their meaning. Pupils must think the correct forms of pronouns and auxiliary verbs into habitual use.

Language-work without an aim has about had its day. Much of the so-called language-work in the primary grades is merely busy work without results. Busy work in the primary grades which makes little or no demands upon pupils has no more value to them than mere routine has to pupils in the grammar grades. The kind of work required in many of the so-called "Language Lessons" is valueless, because it is merely formal.

The teacher of English grammar should ever bear in mind the following facts:

In the English language, a word does not belong exclusively to a single class or part of speech. The part of speech to which a word belongs in a particular sentence depends upon its use in that sentence. That is, the same form of a word may do the work of several parts of speech.

If we place the possessive forms of nouns with limiting adjectives, the noun has but one case-form, the nominative. It varies in form only to denote possession.

Personal pronouns have fixed forms for different uses—number-forms, person-forms, gender-forms, and case-forms. These forms should be mastered and their uses exhibited in original sentences.

The changes in the form of the verb to correspond to changes in its subject are very limited. With the exception of the verb *be*, in the indicative mode, present and past tenses, singular number, there are but few changes in the form of the English verb to denote person, number, tense, mode, or voice.

The adjective keeps the same form' whether joined to a singular or to a plural noun. It is inflected to show degree only. Most adverbs are derived from adjectives and take the same inflection. An average pupil should learn all there is of inflection of the verb, the adjective, and the adverb in one week. Thus we see that the English language is, comparatively, an uninflected language. However, a mastery of the English sentence is the work of a life-time.

If most of the time now spent in many schools in reciting the facts of grammar were spent in expressing thought, it would not be long until the average high school graduate could write a correct application for a situation, or express, in ten words, a ten-word message. He cannot do it now although he has studied text-book grammar for years. He has declined nouns and pronouns, conjugated verbs, compared adjectives and adverbs, imprisoned sentences in diagrams, but still he cannot correctly describe an event, nor state a fact in clean, concise English.

Now this fact is not charged against the pupil, but against the method of teaching English. The pupil has spent years in studying grammar, but has given to the use of language little or no thought. He has recited, but not created. Driving cold, unrelated facts into a pupil's head is not developing him. Mere facts are valueless; mere learning soulless. A pupil's head may be brim full of theory, yet he may lack the power to express his thoughts in clean, smooth English.

When a pupil has learned a grammatical fact, he should be required to use it. Use fixes the knowledge. If you would interest pupils in the study of language,

you must get them to using language. As there is little for a learner to commit to memory in English grammar, he should spend part of every day in sentence-building or in some other form of composition work. Pupils should be required to write business letters, biographies, descriptions of journeys, accounts of recent events, narratives of personal experiences, etc.

Every lesson heard in school should be a language lesson; every incorrect expression should be questioned by the teacher and corrected by the pupil; every wordy statement or explanation should be revised by the pupil until it is clear and concise. The use of language, good or bad, is a growth. Habit is the result of repetition. Teachers should ever be on the alert in regard to the language used by their pupils in the recitation. Exact concise statements from pupils. Ask for revision of every incorrect or wordy statement; be ever on the watch for verbose statements. The liberal use of the word "again" will do more to correct slovenly and wordy statements than all the rules of syntax ever written. Keep pupils constantly on their guard in all they say in your presence. Watch them until thoughtful expression becomes a habit with them. One can dislodge the use of incorrect expressions only by a purpose to dislodge them, and by a persistent use of correct forms of speech.

As soon as pupils can write a fairly good hand they should be required to reproduce, from memory, the best selections from their readers or their story books. These selections should be thoroughly discussed by the teacher and the pupils in the class before they are assigned for reproduction.

Writing letters to real, absent persons is an interesting and valuable exercise in the lower grades. In all composition exercises, accept none but the very best the pupil can do, but do not discourage him by criticising the unimportant errors. Call his attention to only the more important ones. Children should not be too closely criticised in their composition work. The superior wisdom of teachers often discourages pupils.

Short compositions on familiar subjects—the more familiar the better—written according to an outline given by the teacher, usually interests pupils in the use and study of language. The use of language gives meaning to words.

The reproduction of interesting stories from the readers is a valuable training in the use of language. "Reproduction" should have a place on every school programme from the first year of school life to the last one. It should continue through the high school course.

Require pupils to reproduce short stories told by the teacher. Such exercises train pupils to hear correctly and to habits of attention. Frequent exercises in writing short sentences dictated by the teacher will yield good results. The dictation exercises should inductively teach grammatical facts—that is, the exercises should be arranged upon a methodical plan with a definite end in view. Each exercise should drill the class in the correct use of words and, incidentally, teach a grammatical fact. The fact is secondary in value.

Dictation exercises, when properly presented, aid in giving the idea of the sentence and in teaching the correct use of capitals and punctuation. The exercises

should be short. The plan of giving them and of correcting them is important. Principles should first be taught and the exercises should be used to fix them in the mind of the pupil. Pupils should be made to see their own mistakes and to correct them as a part of the recitation. In the criticism of written work it is well to combine in one exercise the mistakes common to the class. Write this upon the board. Have children discover mistakes by judicious questioning. When each pupil understands what is correct, have him, as a part of the lesson, correct his own mistakes and express himself properly. Cultivate a quick "mental conscience".

Pupils should be trained to see and to hear correctly. In dictation exercises, the sentence should be read but once, slowly and distinctly, then the class should reproduce what was given. Pupils are made alert by knowing they are to be called upon to give correctly what they have missed in any recitation.

The end to be sought in the study of language is the ability to find the meaning of written or printed sentences and to clothe thought in correct forms. Sincerity and simplicity of expression in all oral or written language-work are to be aimed at constantly. The material selected for exercises, whether poem, story or reading lesson, should be of the best. Copying or any written work should not be given in too great quantity or as employment merely, to be erased without being examined. Short exercises done with care in the details and in a good hand writing will be found most profitable.

In the lower grades, require the pupils daily to copy a lesson from their readers. Put them to copying from

the blackboard and from text-books as soon as they can write. The purpose of this work is to accustom them to correct spelling, punctuation, and capitalization by unconscious imitation. Copying well written selections in primary grades will do more to fix correct forms of expression than the study of text-book grammar in the grammar grades. By copying, pupils unconsciously learn the important rules for the use of punctuation marks and capital letters. They also learn how to divide composition into paragraphs.

Once a month in the lower grades pupils should be required to commit and recite a choice selection. Such a study of English would do more to improve a pupil's speech than the formal recitation of grammatical facts. It would also store his mind with material for future use.

An occasional exercise in correcting faulty forms of expression is valuable, notwithstanding the fashionable cry, "No false syntax." The correct form should be substituted for the incorrect one and the reason given for the change.

ARITHMETIC.

ADDITION.

The importance to pupils of an early mastery of the fundamental rules is sufficient reason for illustrating a method of teaching them. It is not claimed that the method here given is the only one or that it is the best one. No one has the only way of presenting a subject to children. No one is indispensable. The survival of the fittest does not depend upon the life of any one. Ample knowledge of the subject, interest, and earnest enthusiasm will usually discover the best method.

Children should be taught to name the sum of any two numbers at sight. There is no more excuse for counting numbers together than there is for spelling the letters of a syllable together. To find the sum of two small numbers requires but one mental act.

Only forty-five combinations of two figures each can be formed with the nine significant digits; only seventeen different words are required to name the results. Twenty-five of the forty-five combinations make sums of ten or less. When the combinations are learned the mind recognizes them as different forms of numbers without regard to the figures themselves. Pupils should be so familiar with the forty-five combinations that the sum of two numbers is seen as quickly as the number itself.

The following are the forty-five combinations. Each group contains all the combinations of two figures each which make a given number:

1; 1; 1 2; 1 2; 1 2 3; 1 3 2; 1 2 3 4; 1 2 3 4; 1 2 3 4 5;
 1; 2; 3 2; 4 3; 5 4 3; 6 4 5; 7 6 5 4; 8 7 6 5; 9 8 7 6 5;
 2 3 4 5; 3 4 5 6; 4 5 6; 5 6 7; 6 7; 7 8; 8; 9;
 9 8 7 6; 9 8 7 6; 9 8 7; 9 8 7; 9 8; 9 8; 9 9.

In adding exercises, arrange the numbers in columns—never in horizontal rows. Habituate pupils to business forms and methods. In teaching pupils the fundamental rules the most exacting methods should be used, or bad habits will be formed instead of good ones.

A pupil should add a column of figures as rapidly as he can name the sum of two figures—as rapidly as he can call the names of the mental pictures which repre-

sent the sum of two numbers. When a pupil sees $\begin{smallmatrix} & 4 \\ 5 & \end{smallmatrix}$ or $\begin{smallmatrix} 5 & \\ & 6 \end{smallmatrix}$ he should see 9; when he sees $\begin{smallmatrix} 9 & \\ & 8 \end{smallmatrix}$ he should see

11; when he sees $\begin{smallmatrix} 8 & \\ & 9 \end{smallmatrix}$ he should see 17. Pupils should not hesitate in adding numbers. They should see the sum of two numbers as readily and as correctly as the name of a word of two letters in reading.

If the sum exceeds 10, the right-hand digit is the same as when the sum is less than 10. Thus $\begin{smallmatrix} 5 & 4 \\ 15 & 14 \end{smallmatrix}$ or $\begin{smallmatrix} 5 & 6 \\ 15 & 16 \end{smallmatrix}$ is 19 (9); $\begin{smallmatrix} 6 & 5 \\ 16 & 15 \end{smallmatrix}$ is 11; $\begin{smallmatrix} 6 & 5 \\ 16 & 15 \end{smallmatrix}$ is 21 (1.) That is, the right digit is the same for combinations greater than ten as for those less than ten; hence it is unnecessary to drill on combinations of more than two figures. The sums of the forty-five combinations give all the results so far as the right-hand figures are concerned. The general fact is established in these forty-five individual facts.

As it is often necessary to change methods in the lower grades to keep up interest, I submit another method. Write nine 2's in a horizontal line; under them, without reference to their natural order, write the nine significant digits—then reverse the order by writing the 2's under the nine digits, promiscuously arranged. Thus

2 2 2 2 2 2 2 2 2	2 4 5 7 8 3 9 1 6
2 4 5 7 8 4 9 1 6	2 2 2 2 2 2 2 2 2

Treat each of the digits in a similar manner. Then drill, drill, drill, drill. See that the pupil names the sums as rapidly as you can point to the combinations, and see that you move the pointer rapidly and with purpose. Allow no time to count the numbers together. Skip about in pointing; compel ready and correct results; never do anything by rote or mechanically. Do not allow pupils to name the digits—only the sum.
 4 4 4 4 4 4 4 4 4 2 4 5 7 3 6 8 1 9
2 4 5 7 3 6 8 1 9 4 4 4 4 4 4 4 4 4 is read 6, 8, 9, 11, 7, 10, 12, 5, 13. Require the dullest pupils to recite the whole exercise occasionally and make it a point to reach them every day.

SUBTRACTION.

Subtraction is simple when addition is mastered. Subtraction finds what number added to the smaller of two numbers makes the larger. That is, finding the difference between two numbers is finding the wanting part of the sum of two numbers when one number is given. The minuend is the sum of two numbers, the subtrahend is one of the numbers, and the wanting part is the difference. Subtraction is thinking to the smaller number a number which makes it equal to the larger number.

is given, the other part of the combination is 14. That is, 9 from 13 leaves 4; 9 from 23 leaves 14 (4); 9 from 33 leaves 24 (4).

Write the nine significant figures and then under them write nine 1's. Require pupils to name the differences as rapidly as you can point from figure to figure. Do not permit pupils to hesitate. Your habits soon become the habits of the class.

1 3 2 5 8 6 7 4 9		3 6 7 9 4 5
1 1 1 1 1 1 1 1 1	again	3 3 3 3 3 3

The pupils read 0 2 1 4 7 5 6 3 8 0 3 4 6 1 2

Treat each digit in a similar manner, dropping the figure or figures in the minuend to keep the figure treated always less than the one directly above it. Practice reading differences until great proficiency is acquired.

Why ten is added to the minuend and only one to the next figure in the subtrahend is easily explained. Business men always use this method. There is no reason why business methods should not have the preference over mere pedagogical methods.

A little spirited drill in reading differences where some figures in the subtrahend are greater than those in the minuend will enable pupils to read the results as quickly and correctly as when the subtrahend is uniformly smaller.

MULTIPLICATION.

Find the definition of Multiplication in an explanatory talk. Find all the new terms in the subject in the same way.

Teach that Multiplication is a form of addition—that the multiplier shows how many times the multiplicand

is to be taken or repeated—that the multiplier is always an abstract number—that we cannot repeat a number five cents or five yards times, but five times—that the multiplicand may be abstract or concrete—that the product is the same as the multiplicand because repeating a number or quantity does not change its nature or quality. Thus, 5 units taken 5 times are 25 units—5 yards taken 5 times are 25 yards. Make these elementary facts clear.

Show the relations between the multiplier, multiplicand, and product—that the product is as many times the multiplicand as the multiplier is times 1, or is such a part of the multiplicand as the multiplier is part of 1—that multiplying by a multiplier less than 1 gives a product less than the multiplicand—that the product bears the same relation to the multiplicand that the multiplier bears to 1. Make these facts clear.

Illustrate these facts upon the board—get the pupils to thinking. Be in no hurry to solve problems. Pupils need understanding more than they need answers—inspiration more than facts. Cover the blackboard with examples and have them solved logically; that is, require the results in general terms—the value of the product with reference to the multiplicand—whether it is abstract or concrete—equal to, greater, or less than the multiplicand, and give the reason in each case. With the statement and the result in general terms the thinking ends. The formal act of multiplying adds nothing of value after the mechanical part is learned. Pupils do not solve problems to learn to “cipher,” but cipher when necessary to solve problems. Much thinking is better than much ciphering.

ILLUSTRATION: What are we required to do in this problem? What kind of number is the multiplicand and why?—the multiplier and why?—the product and why? The product is how many times as large as the multiplicand and why? How many times have we used the multiplicand as an addend?

Multiply 8534 by 9. Nine times 4 units are 36 units, or 3 tens and 6 units. Write the 6 units in units' place in the product, and add the 3 tens to the product of tens. Nine times 3 tens are 27 tens; adding the 2 tens we have 29 tens or 2 hundreds and 9 tens. Write the 9 tens in tens' place of the product and add the 2 hundreds to the product of hundreds. Nine times 5 hundreds are forty-five hundreds; adding the 2 hundreds we have forty-seven hundreds or 4 thousands and 7 hundreds. Write the 7 hundreds in hundreds' place and add the 4 thousands to the product of thousands. Nine times 8 thousands are 72 thousands; adding the 4 thousands we have 76 thousands. Write the 6 in thousands' place and the 7 in the ten thousand's place.

What is the cost of 436 yards of cloth at 4 dollars per yard? What are we required to do in this problem? What is the cost of one yard? What is the cost of 436 yards? What kind of number is the multiplicand and why—the product and why?—the multiplier and why? Explain why we sometimes multiply by the multiplicand. See that this convenience is understood. Illustrate, illustrate, illustrate. The blackboard should be the joint property of teacher and pupil.

Require each pupil of the class to explain the principles fully—to define and illustrate the terms used, the result obtained, and the reason for it. Accept no apolo-

gies. When a child is old enough to go to school, he is old enough to exhibit himself. It is your business to see that the exhibition is a success. You cannot do a pupil a greater favor than to make him feel that he is responsible. Get pupils to thinking—that is what they go to school to do.

DIVISION.

Find the definition of Division in an explanatory exercise—teach that one number is contained in another as many times as it can be taken from the other—that division is a sort of subtraction—that one number cannot contain another dollar times, but merely times—that the remainder is the undivided part of the dividend, hence it is like it.

Teach the relations between the divisor and the quotient—that the size of the quotient depends upon the size of the divisor with reference to 1. Teach that all numbers are derived from 1 and that 1 measures all numbers.

As in multiplication, cover the blackboard with examples and require the answers in general terms—that is, the value of the quotient as regards unity and why. Continue the exercise until pupils understand the principles of division. “If principles are understood, rules are useless.”

ILLUSTRATION: Divide 8534 by 9. There are 9 nines in 85 with a remainder of 4. As the 85 is hundreds, the quotient and remainder are hundreds. The remainder, 4 hundred = 40 ten; 40 tens plus 3 tens = 43 tens. There are 4 nines in 43, with a remainder of 7. As the 43 is tens, the quotient and remainder are tens. 7 tens = 70 units. 70 units plus 4 units = 74

units. There are 8 nines in 74 with a remainder of 2. As the 74 is units, the quotient and remainder are units; hence, $8534 \div 9 = 948 \text{ } 2-9$. When all the work is written, the operation is called long division. Show that the reasoning in long division is precisely the same as in short division.

Pupils should be made so familiar with the mechanical work of arithmetic that adding, subtracting, multiplying, dividing will be automatic—done without much conscious mental effort. If pupils are permitted to pass over the ground rules in an indefinite, slipshod manner, the probability is that they will always blunder in the purely mechanical work of arithmetic. It is a sad sight to see pupils in the sixth, seventh, and eighth grades hesitating and guessing in the mechanical part of their work in arithmetic. It is a sad commentary upon their first teachers.

During the first four years of the child's school life, his work in number should be quite evenly divided between the concrete and the abstract. During the first and second years, number facts should be exhibited through means of visible objects. Pupils should perceive the elementary facts of number through the sense of sight. The numeral frame is valuable in the hands of a teacher who knows how to use it. The fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$, $\frac{1}{9}$, $\frac{1}{10}$ should be made from visible, or tangible objects.

Pupils should be thoroughly drilled in adding, subtracting, multiplying, and dividing small fractions—fractions containing but one figure in each of their terms. In each example the process should be fully and clearly stated and the reason for each step concisely expressed.

For such drills, the blackboard should be covered with examples to be solved orally without the use of chalk or pencil. The teacher and the blackboard are more inspiring and helpful than a book and a rule. Every problem in arithmetic which can be solved without the use of slate or blackboard should be so solved. Too much ciphering has ruined thousands of pupils. Ciphering, when not required to hold together long results, relieves the mind of what it should retain to train it.

In the analysis of examples in arithmetic, oral and written, pupils should not re-read the example nor conclude the explanation with the stereotyped "Therefore." Arithmetical problems are only means to an end. The end is a logical statement of the several successive steps in the solution of a problem. No other subject offers a better opportunity to train pupils in the use of concise and clean English than arithmetic. Every clean, concise statement of the steps in the solution of a problem in arithmetic is worth several lessons in text-book grammar. Require a pupil to try again and again until he succeeds in making clean statements.

In percentage, pupils should not be permitted to become machines through the use of the terms *Base*, *Rate*, *Percentage*. A knowledge of the principles of percentage is best acquired by a mastery of simple problems. The nature of the subject is best seen in problems such as are found in actual business, not in the puzzles of the "Complete Arithmetics." The common, fractional forms of expressing percent are simpler than the decimal expressions and should be used whenever possible. Pupils do not go to school to solve puzzles and

improbable examples, but to master principles. The pupil's need is self-reliance, not direction; knowledge, not learning.

Teacher, supplement your daily grist of examples in arithmetic with problems selected from books not in use in the school. Teach your pupils to rely upon themselves, not upon rules and answers. The problems should be selected with special reference to principles, hence should be made a test of what pupils really know. Such "out-side work" may be made a daily or weekly examination without any of the scenes which usually accompany formal examinations.

In addition, subtraction, multiplication, and division of fractions teachers should ignore all examples which were made merely to test a pupil's ability to cipher—to get answers. If a pupil is skilled in getting answers to examples which carry with them no meaning—but merely the observance of certain rules, he is not trained by his ciphering. In fractions omit all examples containing more than one or two figures in either of their terms. In business it is seldom we have use for a fraction which contains more than one figure in numerator or denominator.

In decimal fractions strike out all examples which contain more than three decimal places. In business calculations three decimal places include mills.

In finding the G. C. D. and the L. C. M., ignore all examples which contain more than two figures in one number.

In short, if "Complete," and "High School Arithmetics" must still be used to the exclusion of the elements of the natural sciences, omit the last half of

each chapter or set of examples, and drill the pupils upon those problems which clearly exhibit principles. Ciphering for answers under rules does not develop reason nor self-reliance.

The simpler problems in the elementary and practical arithmetics should be solved orally—that is, without the use of slate or blackboard. The most exacting and concise solutions should be required, and no others accepted. Require a pupil to revise his solution, again, and again, and again, until he finds clean and concise statements.

Arithmetical monstrosities are common sights in all of the traditional “Complete Arithmetics.”

SPECIMEN MONSTROSITIES. “Find the greatest common divisor of: 1273, 2077, 4087: of 2279, 3233, 4399: of 1827, 3906, 4599.”

“Find the least common multiple of: 72, 84, 108, 144: of 63, 105, 147, 231.”

“Find the sum of: $19\frac{2}{3}$, $13\frac{1}{2}$, $6\frac{1}{4}$, $8\frac{1}{10}$. Find the product of: $(8\frac{5}{8} + 7\frac{2}{3}) (\frac{1}{3} + \frac{9}{10})$ of: $(17\frac{3}{4} - 13\frac{1}{5}) (8\frac{2}{3} + \frac{1}{5})$.”

“Perform the operations indicated:
$$\frac{8\frac{5}{8} \times 10\frac{1}{5} \times 17\frac{1}{3}}{18\frac{2}{3} \times 14\frac{1}{8} \times 3\frac{9}{10}} =$$

One more, that the picture may be more distinctly fixed.

“Find the sum of:
$$\frac{12\frac{1}{2} + 7\frac{7}{11} + 32\frac{2}{3}}{8\frac{8}{9} + 28\frac{1}{5} + 38\frac{1}{4}} =$$

Why should any good-natured pupil be given such tasks?

“Write from dictation and read: 3.27806594; 3.0303-0303; 25.0000056.

“Express decimally and read: $\frac{7001}{100000}$ and $\frac{3270065}{100000000}$.”

Many of the examples in addition, subtraction, multiplication, and division of decimals are of the same silly character. There is nothing more symmetrical and uniform than tradition and habit. It is enough to say that in business calculations not one man in ten thousand ever requires greater accuracy than is found in two or three decimal places.

In the treatment of denominate numbers and percentage, the "Complete Arithmetics" abound in the perplexing and the worthless. The apologists claim that the useless is valuable for drill—that pupils must run such monstrosities into holes on account of the disciplinary value of the chase. The end of such folly and trespass upon the rights of children is clearly in sight. Within the next ten years there will come to most pupils pleasanter school tasks than those furnished by the "Complete Arithmetics" of to-day.

In most schools there is too much arithmetic. No properly adjusted program can find time for two lessons a day in arithmetic—one mental, the other written. For many years the leading educators have expressed the conviction that the grammar school course should be both shortened and enriched; that much might be left out of the course, not only without loss, but with positive gain, and that much might be put into it which would make it a far more adequate preparation for the high school, or for life without the high school course.

Teacher, train your pupils to solve arithmetical problems by brief and intelligent methods and keep them free from set rules and formulas. Mechanical processes, routine methods, and set rules end in mere belief—a

cheap and unreliable state indeed. What a pupil does in arithmetic, he should do consciously, not mechanically. Memory or rule arithmetic always fails when needed. Principles should be inductively developed in the class and then consciously applied by the pupils to the solution of the text-book problems. Pupils should be trained to see that the first step in the solution of a problem in arithmetic is to determine what is required, and that the second step is to state the different steps in their logical order in correct, concise language. Training in the use of clear, clean language should be a feature of every recitation in arithmetic.

Now I would not have this arithmetical pebble misunderstood. Arithmetic is a very important school subject. It has both a practical and a disciplinary value. Who will question the practical value of a knowledge of the principles of arithmetic? Who will question the disciplinary value of the study when it is properly taught? Arithmetic correctly taught is the very essence of intellectual training. It should teach pupils accuracy of statement and conciseness of expression. The study of arithmetic should train pupils to think correctly and courageously. Accuracy in reasoning depends upon a clear comprehension of the principles involved; accuracy of statement depends upon the constant alertness of the pupil and the constant surveillance of the teacher.

GEOGRAPHY.

FIRST STEPS. — Introduce this subject to pupils in a simple talk about the earth. Tell them that in shape the earth is like a ball or globe—that the outside of the earth is called the surface of the earth—that the outside of anything is the surface of that thing.

Tell them that the surface of the earth is composed of land and water—that there is more water than land. Take a small globe and show the pupils that only one-fourth of the surface of the earth is land—that three-fourths are water.

Tell them about the size of the earth—why it appears flat—give easy proofs that it is round—get near the pupils in simplicity of statement and illustration. Use the imagination of your pupils before you tax their memories.

Appeal to their curiosity. If possible—and it is possible—get them to see the earth, mentally, swinging in the air; to see that the sun, moon, and stars are all large bodies floating in the air. Help the pupils to create mental pictures of the earth and its relations to the other great planets. Pictures of all kinds please children, mere facts do not.

Fix definitely in the minds of the pupils the cardinal points of the compass, by calling attention to the position of the sun at noon. Show them that when we face the sun at noon, we look south, that our backs are toward the north, our left hands toward the east, our right hands toward the west.

Develop clearly concepts INCH, FOOT, YARD. Develop clearly the concept mile—use this concept in teaching the larger units of distance. Be sure that pupils clearly understand the unit of distance, and how to apply it in interpreting maps.

Require the pupils to draw a map of the schoolroom floor and locate the principal articles of furniture in the room. Require the pupils to draw a map of the school yard and locate the objects in the yard.

See that the pupils understand that maps are drawn on various scales. Require them to interpret the maps of the school room and school yard on various scales. Show them that one inch on a map may represent one mile, one hundred miles, or even one thousand miles on the surface of the earth.

When these introductory and fundamental facts are clearly understood by the pupils, give them text-books—not before then. Give them yourself before you give them a geography.

HOME FIRST.—Pupils should devote more time to the geography of our own country than they have been doing in the past, and less to that of foreign countries. The geography of Africa and Australia should be studied only in a general way—only as wholes. THE SMALL POLITICAL DIVISIONS OF EUROPE, SOUTH AMERICA, AND ASIA SHOULD BE ENTIRELY OMITTED.

Descriptive geography furnishes ample opportunity for the teacher to train his pupils in the use of language, oral and written. Every important geographical fact should be described orally in the class recitation, and afterwards reproduced in the form of composition. Written descriptions deepen the images, and give them

greater symmetry of form than oral descriptions. See that every important fact is correctly described in concise and clean English.

Supplement the present catechism geography with geographical readers and books of travel. It is believed that "catechism geography" has about had its day. Fully three-fourths of the time now spent in stuffing unrelated, geographical facts into the heads of pupils is wasted. A mere accumulation of facts is not knowledge. Facts should be associated with thoughts, feelings, and experiences. The facts of the traditional catechism geography are so dryly stated that pupils are not interested in collecting and reciting them — a compliment to human nature.

ELEMENTARY COURSE. — Geography should be studied from topical outlines, placed on the blackboard daily by the teacher. In this way and in this way only, can the teacher separate the useful from the useless in this study. The following outline suggests topics for the fifth and sixth grades, or fifth and sixth years.

Map of the county, with location of the county seat, and principal towns and rivers. Map of the State, with location of capital and five of the largest cities, and three of the largest rivers.

Map of the United States, with boundaries; location of the Appalachian, Rocky, and Sierra Nevada mountains; the great lakes; St. Lawrence and Mississippi rivers; New York, Philadelphia, Washington, Boston, St. Louis, Chicago, New Orleans, San Francisco.

Map of North America, with boundaries; political divisions; location of the Rocky and Appalachian mountains; Capes Prince of Wales, Race, Sable, San Lucas;

Bering Strait; Gulfs of Mexico and St. Lawrence; Hudson Bay; Caribbean sea; Mississippi, Mackenzie, and St. Lawrence rivers.

Map of South America, with boundaries; location of the Amazon, Orinoco, and La Plata rivers; Andes mountains; Isthmus of Panama; Rio Janeiro, Pampas, Selvas, Llanos; definition of latitude, equator.

Map of Europe, with boundaries; location of British Isles, France, Italy, Germany, Switzerland, Russia; Strait of Gibraltar; Mediterranean, Black, and Caspian seas; Thames, Seine, Rhine, Danube, and Volga rivers; Alps mountains; definition of longitude.

Map of Asia, with boundaries; location of Siberia, China, Japan, India, Turkey; Himalaya mountains; Obi, Lena, Yenisei, Yang-tse-Kiang, and Ganges rivers; Peking, Calcutta, Jerusalem.

Map of Africa, with boundaries; location of Egypt, Sahara; Nile, Niger and Congo rivers; Isthmus of Suez; Cape of Good Hope.

Maps for use rather than to dazzle the eye.

ADVANCED COURSE. — General outline for the seventh and eighth grades, or seventh and eighth years.

United States. Population; outline and boundaries; principal coast waters; principal ranges of each mountain system and chief mountain peaks.

North America. The Arctic regions, Newfoundland, West Indies, Mexico. Outline and boundaries; largest coast waters; zones. Natural divisions; mountain systems, with highest peak of each; the great lakes, with their connections; description of the St. Lawrence, Mississippi, Rio Grande, Colorado, Columbia, Yukon, and Mackenzie rivers. Location of the important islands,

the Bermudas, Bahamas, the greater Antiles. The most northern, eastern, southern, and western capes. Countries: form of government and capital of each. Location of twenty leading cities.

South America. Important countries, Brazil, Chili, Argentine Republic; shape, outline, memory map.

Europe. Important countries, Great Britain, France, Germany, Russia, Austria, Spain, Italy. Outline and boundaries, coast waters, capes, islands, natural divisions of surface; principal mountain systems; highest peak, with height. Principal rivers. Countries, with form of government and capital of each. Twenty leading cities, their location, and one important fact connected with each. Ten exports, with the names of the countries from which they are sent. Distinction between England, Great Britain, British Isles, British Empire. Memory maps of the grand divisions.

Asia. Physical and political geography of the important countries, Japan, China, India, Siberia, Arabia.

Africa. Important countries, Egypt, Cape Colony, Congo State, Sahara, Soudan.

Australia. Studied as a whole. Oceanica, East Indies, New Guinea, New Zealand, Hawaii, Society Islands, Feejee, Samoa.

Memory maps of the grand divisions.

The formal study of catechism geography in the fifth and sixth grades should be preceded by the study of easy books of travel, or geographical readers.

Some books for reading and reference in fifth and sixth grades:

“Our Own Country”; “Our American Neighbors”; “Our World, No. 1”; “The Rocky Mountains”; “Travels in Mexico”; “Stories of England”.

Some books for reading and reference in seventh and eighth grades:

“The Earth and its Inhabitants”; “Bird’s-eye View of the World”; “By Land and Sea”; “Old and New Worlds”; “Around and About South America”.

Every school district should own at least a small reference library of historical and geographical textbooks.

Geography should be an inspiring and profitable study. Properly taught, it is the best common school study for training the imagination. It should be taught principally by means of descriptive texts, imaginary journeys, books of travel, and relief maps. The mere recitation of unrelated geographical facts has little or no meaning. Pupils may recite facts without acquiring knowledge. Mere recitation is not significant. Recitations which do not have in view definite results are almost valueless. The recitation should create ideals and be characterized by energy, purpose, and feeling on the part of both the teacher and the pupils. Geography, if properly taught, trains pupils to create mental pictures of the surface of the earth. The study should train the pupil to see oceans, lakes, rivers, hills, mountains, villages, cities, railroads, etc. Through the help of the imagination the lines, and marks, and dots on the maps, should become real representations. The pupil’s imagination should give meaning and life to the picture map before him.

HISTORY.

Treat only the great events. Only the essential facts should be dwelt upon—those events which constitute indispensable landmarks. Fully nine-tenths of the events, names, and dates found in most of our common school histories should be omitted.

In the treatment of war periods, stress should be laid upon causes and results rather than upon names and dates. It matters little what man or what date, but rather what cause and what result. History is not concerned in the details of battles nor in the biography of obscure men.

Teach history by topics, not by pages. Forbid the recitation of the text. Verbatim recitation of the text trains a pupil to distrust himself. From the beginning, require the essential facts stated in the pupil's own language. Every lesson in history affords an opportunity to train pupils in the use of correct language.

The aim in teaching history is character, not facts. A knowledge of facts is valuable only when it ends in correct ideals. The proper study of the history of the United States is a study of ideal lives—Washington, Franklin, Lincoln. The study of the history of the United States should lead pupils to love the government of the United States.

After a careful study of a chapter from a topical outline, require the pupils to reproduce the topics in writing. Require frequent written reviews. Teaching should be real; it should have meaning; it should yield results; it should reach the heart as well as the head.

No text-book is needed below the sixth grade. Biography is the basis of history and is more interesting to young pupils than history proper. That is, the history of individuals is more interesting and more instructive to young pupils than the history of a whole nation of people. The biographies of Columbus, Washington, Franklin, and Lincoln should be read during the fifth and sixth years and the principal events of their lives reproduced in writing in the pupil's own language. "The Landing of the Pilgrim Fathers", and "The Star-spangled Banner" should be learned in the fifth and sixth grades.

In the seventh and eighth grades, the study of the "Common School History" should be enlivened and enriched by the study of the biographies of ideal Americans. In these grades "To Thee, O Country", "Hail Columbia", and "Paul Revere's Ride" should be committed to memory and recited often. A taste for biographical, historical, and other good reading should be encouraged; love of country should be inspired and developed by a proper interpretation of the facts of its own history.

Use only enough of detail to create interest. Connect cause and effect. Fix in the minds of the pupils a knowledge of ideal men by pointing out their like and unlike traits of character. Contrast is a means of education. History leans upon geography. The geography of a country determines the kind of inhabitants it has, the occupations of its people, hence its history. Events in history should be associated with locality; fact with place.

FOUNDATION FACTS.

INTRODUCTION. In the hope of interesting the young teachers who may read this book in the study of educational psychology and correct methods of instruction, I have arranged a few fundamental facts for their consideration.

As attention is the necessary accompaniment of all conscious mental life, and determines the mind's capacity to acquire knowledge, I place it first in a review of the most important pedagogical facts.

The psychologist would, no doubt, see somewhat of repetition in the facts given below. But with students the same fact, concrete or abstract, must be seen from many angles and in many forms before it is clearly comprehended. The essential facts of psychology, like the great facts of life, are few and simple, but are best seen in many different forms.

ATTENTION.

FACT I. Attention intensifies a mental state. Give an illustration of this psychological fact.

FACT II. Attention determines the character of the percept. Apply this fact to a lesson in written spelling.

FACT III. Attention determines the effect of mental pictures. Give three illustrations—one caused by emotions of joy; one, by emotions of pain; one, by a beautiful scene.

FACT IV. Perception is a vivid state of consciousness; memory, a faint state of consciousness. Show that the statement is true. Apply the fact to instruction.

FACT V. The permanency of an impression depends upon the attitude of the mind when it was first perceived. Apply this fact in teaching penmanship and map-drawing.

FACT VI. The clearness of a percept is inversely proportional to the number of objects simultaneously in consciousness. Show the general application of this fact to instruction.

FACT VII. The mind is usually conscious of more than one thing at a time. Give two schoolroom illustrations.

FACT VIII. Attention converts vague, indefinite impressions into clear and definite impressions. Give two illustrations—one concrete, the other abstract.

FACT IX. The longer the mind is concentrated upon a single thought or object, without weariness, the clearer the thought or object becomes. Make general application of this fact to instruction.

FACT X. The more intense our sensations, ideas, and feelings, the more they compel attention. Give three illustrations—one caused by physical pain; one, by pity; one, by joy.

FACT XI. Voluntary attention is the selective power of the mind. Give two illustrations—one involving a choice between pleasure and duty; the other, a choice between several articles of merchandise.

FACT XII. Voluntary attention is the result of training. It is application. Voluntary attention usually

requires freedom from disturbance—a measure of solitude. Apply these facts to the government of a school.

FACT XIII. Without attention there can be no conscious sensation; hence no perception. Give three illustrations—one involving the sense of sight; one, the sense of hearing; one, the sense of taste.

FACT XIV. Every activity, physical, or mental, results in a tendency to repeat the same act or similar acts in the same manner. Give three illustrations of the nature of habit—one in primary reading; one in “position”; one in the use of language.

FACT XV. Every mental or physical act tends to increase the size and the power of the part exercised. Give three illustrations—one mental, two physical.

FACT XVI. The strength of a habit depends on its age and the frequency of its repetition. Give three illustrations—one in school work, one in business life, one in society life.

FACT XVII. Habit saves time and effort. Give two illustrations—one in school work, one in business life.

FACT XVIII. Habit is automatic. Give two illustrations—one mental, one physical.

FACT XIX. Correct methods of instruction proceed from the concrete to the abstract. Give two illustrations—one with whole numbers, one with fractional numbers.

FACT XX. Correct methods of instruction proceed from individual facts to general facts. Give three illustrations—one in arithmetic, one in grammar, one in natural philosophy.

FACT XXI. Correct methods of instruction recognize a dependent relation among school studies. Show

that a thorough knowledge of a subject assists a pupil in studying related subjects. Give three illustrations—one in primary number, one in advanced arithmetic, one in grammar.

FACT XXII. Correct methods of instruction use the knowledge which a pupil has already acquired in helping him to acquire new knowledge. Thus perception aids apperception. Acquiring knowledge is interpreting the unknown through the known. All we learn makes additional learning easier by offering additional points of attachment. Give three illustrations of the apperceptive process—one from botany, one from grammar, one from arithmetic.

FACT XXIII. Correct methods of instruction require the pupil to return whatever was imparted to him. This the teacher can compel the pupil to do only by questioning him. Questioning requires a pupil to give an account of himself to the teacher as well as to his classmates. Only by questioning can a teacher test the knowledge of his pupils. Pupils often recite quite flipantly the words of a text-book without the slightest idea of their meaning or application. Teachers should not assume that pupils understand what they recite or that they can illustrate definitions and rules. Teachers should know that that pupils know. Give three illustrations of the value of questioning—one in reading, one in grammar, one in history.

FACT XXIV. Correct methods of instruction begin or close a recitation with review questions. Reviews deepen impressions and awaken associations which aid retention. The questioning of to-day should cover the lessons of to-day and review the lessons of yesterday.

If pupils are confronted in to-day's lesson with review questions, they will be more thorough in their work. Question only in regard to essential facts or principles. Do not tire and discourage pupils with questions about detail. Detail usually takes care of itself.

FACT XXV. Correct methods of instruction recognize the psychological fact that voluntary attention depends upon interest. It is a well established pedagogical fact that mere iteration diminishes interest—that interest depends upon new openings for thought. Every competent teacher knows that when a pupil thoroughly understands a principle or a problem, he immediately loses his interest in it. It is the unknown that keeps humanity awake. Few people read a novel a second time. When a child is tired of its playthings, it is willing to give them away. An object or a study interests only as long as it presents new phases to the mind. Continued mental growth without new material for the mind to work upon is impossible. Give three illustrations—one in primary reading, one in primary number work, one in history.

METHOD. Success in the school room depends upon three things: (1) a clear idea of what is to be done; (2) a clear idea of the best way of doing it; (3) a strong motive for doing it well. Quality measures the value of instruction. Quality is the great thing. In the successful teacher it is a constant thing. A teacher may know the subjects he teaches but not how to teach them. He may not know how to use them in the development of the mental powers which the study of the subjects should promote. A teacher must know how the mind works that he may supply it with the kind of

exercises which will develop and strengthen it. He must know something of the kind of effort the pupil must put forth to acquire knowledge. No one who blindly copies the methods of another can ever make an inspiring teacher. Back of every success is intelligent aim, purpose, courage, and enthusiasm. A machine teacher does not carry into his work either of the primary elements of success. The teacher who does not study methods as well as text-books must always remain a copyist. A knowledge of correct methods is as necessary as a knowledge of the subjects taught. A desire for learning is more valuable than learning—one is a constant source of pleasure and profit; the other is often transient and valueless. The mere ability to peddle text-book facts does not require a high degree of natural fitness or culture.

When the principal thing about a teacher is purpose, he is greater than all methods. When his very soul is impacted into his teaching, he is indeed a moral as well as an intellectual leader. In the work of the school the essential is not text-books, nor text-book facts, but earnest, capable men and women teachers. The real influence in education is not the fact taught, but the inspiration which accompanies its teaching. The true teacher seeks not to make pupils recite, but to make them think. Thinking is the beginning of wisdom. There is little or no moral force in mere belief. We may theorize and speculate and not become either better or wiser. A teacher needs the power to will and the courage to do. If he would inspire and direct, he must act. If he would free others, he must first free himself. If he would have self-reliant pupils, he must be self-reliant.

HABIT. In the work of the teacher, habit stands next in importance to attention. The nature of habit may be seen in a routine life or in the life of a man of correct business methods. The degree of perfection which habit has attained may be seen in the ease with which an act is performed. The strength of a habit may be seen in an effort to dislodge a bad habit of long standing. The fundamental fact of habit is that any kind of action, mental or physical, is more easily and correctly performed after many repetitions. We acquire power and facility in action, mental or physical, only by repetition.

Habit is acquired action. "Energy follows the lines of least resistance. Psychic action carves out physical channels in the process of time and flows into them as a matter of course." Habits are often acquired by conditions in our surroundings to which we give little or no thought. They fasten themselves upon us so gradually that we are often unaware of the character of our acquisitions. For convenience or policy we adapt ourselves to our environment and acquire the habits of our associates. As habit tends to become permanent, it may be an obstacle in the formation of other habits. The greatest obstacle to the formation of correct habits is the existence of incorrect ones. Schools cannot educate children, but they should establish them in correct habits of study—habits which may lead to great accomplishments in after life. The sum of one's habits is character, and character is destiny.

Teachers should ever bear in mind that one lesson in good habits is worth more to a pupil than three lessons in rule arithmetic, five in catechism geography, or ten

in technical grammar. Teaching a child is training him in all that makes him better as well as wiser. Habits describe the real differences between men.

“ Ill habits gather by unseen degrees,
As brooks make rivers, rivers run to seas.”

A study of these simple facts should convince the youngest teacher that he ought to know something of psychology and of correct methods of instruction. The teacher who knows nothing of psychology must copy the methods of others. If he copies after good models, he may succeed as a teacher; if he copies after bad models, he must fail as a teacher. In either case he is a machine. His instruction must lack the force of personal power; it must lack the enthusiasm which compels attention and which leads pupils to independent thinking. He will be afraid to venture beyond the traditional routine of his models. The work of the school or of life in general cannot be well done mechanically. Every successful teacher is partly original. Success depends more upon what is within than upon what is without.

There is no reason why the teacher of average ability should not understand the foundation facts of school room psychology. They are easily learned and easily applied. Many earnest and inspiring teachers have studied text-book psychology without interest or profit. They have studied *words* but not the subject. Psychology is a study of the *self*. It cannot be learned from text-books alone. In the text-books we may find the facts of psychology, but not the subject of study. Text-book facts can only aid one in the study of the laws which govern the actions of his own mind.

No one without some knowledge of the laws which govern the operations of his own mind is consciously certain that his methods of instruction are in harmony with the laws which govern the minds of others. The study of psychology is a study of mental processes and products rather than a study of text-books. The essential facts of educational psychology are easily within the comprehension of the average high school pupil and should be mastered during the high school course.

Teacher, learn how your own mind acts that you may know how the minds of your pupils act. By becoming thoroughly acquainted with yourself, you will better understand your pupils. By learning how you acquire knowledge you will learn how to instruct others. If you would know the laws which govern the growth of mind, you must experiment with your own mind. In the study of psychology the need of experiment with the self is exceedingly great. The general facts of psychology are best seen in the inductive processes which discovered them. Every teacher must discover these facts for himself through a study of self. Read psychologies, but study self.

Classroom psychology is the psychology needed in the schoolroom. With the crude speculations of the physiological psychologist the practical teacher is not concerned, but with the everyday facts of educational psychology he should be deeply concerned. A conscious knowledge of the essential facts of schoolroom psychology is all that the individual teacher needs whether he teaches a country school or fills a chair in Harvard or Yale. A thorough knowledge of the subjects he teaches; a clear idea of the function of a school; a well

defined purpose enlarged and emphasized by tact, sympathy, interest and energy—these are the essentials in the make-up of a successful teacher. The presence of a breathing teacher inspired with the zeal born of a love of children is the real need of a large majority of our schools. Correct teaching is the product of ample knowledge of the subjects taught, sound methods, and tact in applying them. The ability to inspire, command, direct, and save is the teacher's greatest need. A teacher's value depends upon his power to stimulate mental activity among his pupils. A teacher should feel the needs of his pupils. Each special aim should be a part of the universal aim—the harmonious development of all the powers of the soul—*life itself*. The mission of the teacher is too grand and too responsible to be entrusted to a mere time-server or a creature of chance, sympathy or local favoritism.

Psychology is the basis of the science of education. A teacher should know why he teaches a subject, and why he prefers his method of teaching to other methods. He should know how the mind grows and the effect that the study of any subject will have upon it. A teacher should know that the aim and end of teaching is mental power, not an accumulation of facts. He should know that the function of the school is to train the child for complete living. He should know that the school is only a means to an end, and that the true end of education is right conduct. He should know that the chief business of the teacher is to teach, not to preach. Teaching is action, preaching, precept. Mere belief is passive; action, persuasive. To believe merely is to exist merely; to do is to live.

“To teach mankind some truth
So dearly purchased—only then I found
Such teaching was an art requiring cares
And qualities peculiar to itself;
That to possess was one thing—to display
Another.”

A teacher should know that knowledge alone is insufficient, and that expert knowledge without the ability to apply it is dead knowledge. Professional strength means the ability to apply expert knowledge. The successful physician is the physician who knows how to apply the teachings of his text-books in the diagnosis and the treatment of disease. It is so with the successful teacher. He knows the subjects he teaches and how to teach them. He knows that a memory stored with facts without the ability to reason, and the ability to reason without facts are equally sorry conditions. He knows that the advantage of study is not in an accumulation of facts alone, but in the power to use them as the basis of a conclusion. He knows that the mere recitation of text-book facts appeals almost exclusively to the memory and does not, cannot, develop the power to think, to observe, to do.

The outlook. The present is indeed a state of encouraging unrest. Every decade makes radical changes in the subjects taught in the common schools and in the manner of teaching them. Much experiment is yielding some success. The methods of instruction are becoming more and more observational and objective year by year. Parents are beginning to believe that the lack of interest on the part of their children is due to ignorance of proper methods on the part of teachers. Parents are beginning to demand trained men and women

for teachers. They are beginning to see that trained teachers are required to train children. They are beginning to see that training children is more than recitation hearing, making out statistical reports, and pay rolls. They are beginning to see that the great lessons of the schools are learned not in text-books but from teachers.

As new and better methods are discovered, tested, and approved, the office of the teacher becomes more difficult to fill. The demand for trained teachers is steadily on the increase. Machine teachers are on the decline. Many of the small cities have established training schools and States are building more Normal schools. The teacher who is satisfied with his present attainments and ideals will soon be placed on the retired list. The teachers of to-day must meet the requirements of to-day. The teacher who has realized his ideals has already begun to decline and die.

"There's life alone in duty done,
And rest alone in striving."



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